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Truss Maker to the Westminster Hospital, & Marylebone Infirmary

N°. 50, STRAND, LONDON.

USEFUL HINTS

TO THOSE WHO ARE

AFFLICTED

WITH

RUPTURES;

ON THE

NATURE, CURE, AND CONSEQUENCES OF THE DISEASE;

AND ON THE

EMPIRICAL PRACTICES

OF THE

PRESENT DAY.

THE SECOND EDITION.

By T. SHELDRAKE,

TRUSS-MAKER TO THE WESTMINSTER HOSPITAL.

LONDON:

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TO

JOHN HEAVISIDE, Esq.

SURGEON EXTRAORDINARY TO THE KING,

F. R. S. F. S. A. &c. &c.

To whom any attempt to establish rational Principles of treating a Disease, that has been too much abandoned to the Practices of Quackery, will prove acceptable,

THIS WORK IS,

(BY HIS PERMISSION)

Dedicated, by

His most obliged, and most obedient Servant,

THE AUTHOR.

No. 5, Montague Street,
Russell Square.

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PREFACE.

The following observations were composed for the information of those whose knowledge of ruptures was limited to the fact that they themselves were afflicted with the disease. Such may generally be divided into two classes, viz. those to whom the disease is an object of terror, and those who think it is of no consequence: the former torment themselves with needless apprehensions, and embitter their lives with perpetual anxiety to avoid evils that are created by their own imaginations; while the latter frequently betray themselves into imminent danger by their imprudent negligence.

To re-assure the one, to caution the other, and to point out to both the only course that will place them in safety from the effects of this disease, are the objects which, it is hoped, may, possibly, be effected by this publication. It contains what may be called a popular account of the disease, i. e. such an account as professional men will allow to be true, and patients may understand, without possessing that information which professional men have on the subject.

On the radical cure of the disease it was not necessary to enlarge much, because that subject is so well understood, the opinions of intelligent professional men are so firmly established, and the attempts to perform the radical cure are so generally avoided, even by empirics, that it scarcely seemed necessary to enter into that part of the subject; but, as a disposition has been manifested to revive some exploded doctrines on the radical cure, it was thought right, in a work of this nature, to lay some of the well-known opinions upon that subject before the reader. Those which have been selected are either from Mr. Pott, whose authority on the subject is now become classical, or are similar

similar to his, where it has not been thought necessary to adopt his own words.

On the palliative cure, a different system has been, necessarily, pursued. As the palliative cure of a rupture is effected by the application of a truss, a very wide field is at once opened for investigation. The pretenders to new invented trusses are the principal empirics who lay siege to the credulity of ruptured patients in the present day: all of them pretend to unrivalled excellence, and infallible success; most of them have their vouchers, and some have their patrons, who use *not the most* justifiable means to puff their favourite nostrum into notice; and, where such artifices are practised, it would be singular indeed if the unwary were not sometimes deceived. From a knowledge of these truths, it has been thought right to discuss the general principles on which trusses should be constructed, and to investigate the actual merits of those which are most obtrusively forced upon the public notice. The consequences of this investigation cannot be equally honourable to all; yet, if it is fairly conducted, it may ultimately procure to each that portion of approbation which it will be found to deserve.

In thus destroying the absurd pretensions of many to infallible success upon this subject, I have no contre-projet to set up in their stead. I am convinced that almost every rupture requires a truss to be adapted to its own peculiar circumstances, and which, of course, would be improper if applied to another rupture, under different circumstances. The existence of this axiom, when it is understood, will at once prove that the construction, adaptation, and application of a truss, is as much an effort of professional skill as the application of any effectual remedy to any other disease: there is the same room for exerting superior skill on one side, and the same opportunity of doing mischief through the rashness of ignorance on the other, as in the treatment of any other disease. Whenever this axiom shall be generally acknowledged, a field will be opened for men of talents and education to engage in the practice of this employment, which is now too frequently abandoned to workmen of the lowest description. If I should succeed in doing this, the satisfaction of contributing to establish a rational practice, on the destruction of *one* species of injurious quackery, will amply compensate for the trouble it may cost me.

Besides

Besides investigating, in a general way, the principles on which trusses are applied to produce their effect, I have attempted to ascertain, to what kind of ruptures peculiar species of trusses may be best applied. This attempt must, from the nature of the subject, be imperfect; but, I trust, so much has been said as will demonstrate that no one kind of truss can be applicable to all ruptures indiscriminately; and this demonstration will prove the absurd pretensions, and mischievous tendency of trusting on this subject to that description of persons, who, having acquired the knack of making trusses in some particular manner, apply those trusses indiscriminately to every patient who comes in their way.

Works like this generally fall into the hands of those who do not apply regularly for professional advice. To make it useful to this description of readers, I have inserted such information as can, without impropriety, be given in writing with respect to the patient's management of himself, and the application of the truss. Much advice of this kind must be varied according to circumstances, and adapted to individual cases; yet, as a kind of general system, if such a term may be used, I hope that what is contained on that head in the following pages will not be found entirely useless. In short, though it is possible, that, from the various objects it embraces, few will take the trouble to read the whole, yet I am not without hopes, that, whether the patient's object is to obtain a just account of the various trusses that may be offered to his notice, or a rational idea of the principles on which trusses should be applied to afford the best chance of being useful, he may find the following little work not entirely beneath his notice; and, on this account, though not without knowing it has many defects, and believing it may have many more than I actually know of, I chearfully leave it to its fate.

Though it is an unpleasant task, as it cannot be executed without the appearance of egotism, I trust that I shall be excused for taking this opportunity to say something of myself, when I shall have given the reasons which induce me to do so.

A person who foolishly supposes, that by using every means in his power to vilify my character, he shall serve his own interest, tells those who will listen to him, that I

ASSUME THE CHARACTER AND PRACTICE OF A SURGEON: this is (within the knowledge of the person who makes the assertion) entirely false; and the assertor is so far beneath notice, that, if a mistake of a different nature had not been made in a more respectable quarter, I should not have thought it necessary to say any thing now upon the subject.

The Editor of a Review*, who gave a very fair, liberal, and, I trust it will be found, a very just account of my last publication, has begun his account with the following observation, "Distortions of the feet are so frequent and so "distressing, that every rational attempt to remove them "deserves to be examined with proper attention. The "The author of this Essay, *though not a professional man*, "offers a mode of treatment in these cases, that has many "circumstances to recommend it, and which is supported "by the result of different practical trials. *Why surgeons, "who are acquainted with the anatomical structure of the "parts*, have not, by availing themselves of mechanical "science, treated deformations of this, and other kinds, "on philosophical principles, we are not enabled to say; "but certain it is, that they are rarely undertaken by persons thus educated."

The account which this Reviewer gave of my Work is so very candid and fair, that it is impossible to suppose he meant to act in an hostile or illiberal manner; yet the conclusion, which any unprejudiced person may draw from his exordium, is, that I am not a *professional man*; that I do not understand the anatomical structure of the parts which are concerned in the diseases I am undertaking to cure, and of course, though what I offered to public notice *has many circumstances to recommend it*, it has come into my possession by other means than by the study of causes, and consequent adaptation of means to produce effects; and, of course, that my discovery, whatever it might be, or by whatever accident it was made, would be less valuable than if it had been made by one who was prepared, by previous education and practice, for the undertaking.

Such

* Analytical Review for October 1798, page 387. The whole extract is inserted at the end of this work.

Such an opinion given by one whose intentions were evidently favourable, and an insinuation like that which I before noticed, that has been made with no good intention, prove that the real nature of my situation and pursuits are not generally known by those with whom I am not personnally acquainted; and, with some other reasons which soon will appear, will, I hope, justify me in now writing, thus particularly, to give an account of myself.

My father was what is usually called a truss-maker; he had the most extensive business of that kind, and had the highest reputation in his time for the usual routine of his business; but he never pretended to what he did not possess, a professional knowledge of those diseases which may be alleviated or cured by the judicious application of mechanical means. He gave me a liberal education, bred me to his own employment, and twenty-three years ago determined that I should enter the world in an independent situation.

In the situation to which I was bred, I continually saw professional men recommending patients to apply for mechanical instruments to assist, alleviate, or cure various diseases, which could not be assisted by any other means, and seldom were these applications attended with success, from the total want of professional knowledge in the person applied to: and I was thus early impressed with a conviction, that a certain class of diseases might be materially assisted, and many of them radically cured, by mechanical applications; provided that the knowledge of the diseases, and the power of supplying the necessary remedies, could exist in the same person.

My actual knowledge was, in the beginning, no more than I could gain from the experience of my father in his particular department: but I was no sooner at liberty, than I determined to make every exertion to qualify myself for that undertaking I resolved to engage in: I became a pupil in the anatomical and surgical schools of the Hunters, with a design to learn every thing from them which could promote my success; and at the same time, and from that time to the present moment, have devoted all my time, made every exertion, and spared no expence, to obtain knowledge of every kind, that could contribute to the success of my favourite plan. How far it has been successful

it is not for me to say; but as I see professional men, rising into eminence, to whom I was known when we were pupils; and by whom I have been known from that time to the present, I shall leave that part of my character to be determined by their report of me.

If these facts had been known to the Reviewer, he would, perhaps, instead of saying I was not a *professional man*, have said, that I was neither physician, surgeon, or apothecary, but that, having endeavoured to acquire a competent knowledge of every department of science, that was connected with the subject of my pursuit, I solicited attention, upon that ground, to the subject I was then laying before it.

The subjects to which my attention has been directed, are those diseases to which bandages, or mechanical applications of any kind may be applied, to assist, to alleviate, or to cure. A very extensive list! one essential part of which is the construction and application of bandages to various kinds of herniæ; this is the subject of the papers which are now laid before the Public; another is the treatment of curvature in the spine and deformities that are connected with it: upon this subject I published, more than twenty years ago, an essay, in which I described an instrument for such purposes, that was constructed upon principles which *then were new*, but now are to be considered as firmly established *; and a third is the cure of distortions in the legs and feet of children and others, which had always been considered as absolutely incurable till I discovered a system of treating them with uniform success.

The opinions of professional men were various upon this subject: the most sanguine limitted themselves to decide, that such diseases might be cured at a very early period

* It may not be improper to observe here, that although the principles on which I began to treat this complaint were just, so far as they went, and superior to what had been previously known, I am now authorised to say, they were extremely imperfect. Continual experience, since the date of that publication, has enabled me to improve every part of my system, and bring it nearer to perfection: the result of that experience will be published in a Treatise upon that subject which I am now preparing for the press.

period of life; but, it was universally agreed, that at a more advanced stage it was physically impossible to cure them, and no man of character would make the attempt. Attempts were made, however, but by men who were either unqualified by nature or education, or by such as with a moderate share of cunning, and very little knowledge, undertook such things, with no better design than to obtain money from the credulous; and, in consequence of the uniform termination of such undertakings, the whole were, perhaps with too much justice, considered as the practices of unprincipled quacks.

With a knowledge of these facts, after fully investigating the subject, I commenced my undertaking: I knew that, by promising too much or failing in any thing I undertook, I should inevitably be placed upon the list of those unprincipled or ignorant men, who had ventured on the same subject before me. Knowing the importance of reputation, and that I staked that, as well as every thing valuable in life, upon my undertaking, it cannot be surprizing that I should proceed with extreme caution. I ascertained every fact that came under my observation; I published no fact but what I had evidence to prove, and while I stated, from positive experience, what might be done to cure these diseases, I argued by fair induction from those facts, to shew the probability of success in other cases which appeared to be more hopeless: by this proceeding I obtained the confidence of other patients, who, at more advanced periods of life, were entrusted to my care. Fresh experiments led to fresh success, and though it is now known, that these diseases may be cured at periods of life when it was thought it would be impossible to effect any thing, we have no data from which to conclude at what period of life such distortions are certainly incurable:* I have the satisfaction to know, that in no case that has

* In 1798, I published a Practical Treatise on the Club Foot, &c. in which was inserted an explanation of the principles upon which I conducted the cure of those deformities, with thirty one cases of patients not exceeding the age of two years, and had been cured. From the structure of the parts, and the facts of those cases, I argued the probability there was, that persons much farther advanced in life might be cured of the same diseases. Subsequent experience has justified the conclusion; and, in the course of next winter, I shall publish a collection

has been entrusted to my care has *less* been afflicted than I had foretold; that, in many, much more has been done, and that my veracity has never been questioned in the accounts I have published of those cases, which have been entrusted to my care: yet with all this caution, and so much success, it is a little hard that my character should have been injured, upon this very subject, by the base conduct of one, by whom, in the ordinary course of human transactions, a man would least expect to be injured in this manner. As I know the conduct to which I allude is adopted systematically, and practised steadily, with a design to carry it to the utmost extent, I think it my duty, and believe it will be possible, to put an end to it, by making the transaction public.

I have a younger brother, with whom I have chosen to avoid all connexion or communication: this person, like myself, received from his father the instructions that were necessary to make him a decent common truss-maker; and, so long as I had any knowledge of him, he had no other qualification, nor did he seem to have talent or inclination to qualify himself for any thing better: he may since have improved himself much in that respect; of this fact I have no knowledge, but if I am to judge of the progress of his knowledge, by the increase of his candour, liberality, or integrity towards myself, I shall have but very little to say in his favour on that subject. So soon as I had reduced my system of curing the club foot to a state that I could ensure its success, I took out a patent for the discovery. At first many professional men very naturally supposed that I was too sanguine in my expectations, and suspended their opinions till more facts were known. But while these gentlemen very properly acted in this manner, some of my own relations were active, upon every opportunity, in representing me as an impostor, *who was intentionally practising deception for the purposes of fraud.* This was not very *decent*, and had very little effect; and William Sheldrake soon adopted a practice which he probably thought would be advantageous to himself, whatever degree of reputation might attend it.

Soon

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of facts, to prove that every case of the same disease which has come under my care, even at so late a period as the age of fifteen years, has been completely cured.

Soon after the publication of my Treatise on the Club-foot, I was informed that he had, in one case, attempted to practise my method of curing that disease. I obtained permission to examine the patient, and found it was the slightest degree of the disease, in a very young child, and that he was applying, as well as HE could, instruments that resembled* those which I should have used in a similar case. I requested my attorney would write to inform him that I had discovered he was infringing on my patent, and that, if he did not immediately desist, or if, in any other instance, he acted in the same manner, I would support my right, and prosecute him to the utmost rigour of the law. To this no answer was returned; but I soon found a report was in circulation (I know not by whom propagated) that *I had* brought an action upon this subject against this innocent, good brother. The truth is, that I did not, nor even intended to do so; but well knowing both his principles and practice, I directed my attorney to write, that he might not afterwards say he had *unintentionally* attempted to pirate my invention; and, I presume, the publication of this fact will as effectually do him justice, as if he had been prosecuted legally for this daring and *very honest* attempt to injure my property.

Some time after this I cured the son of a gentleman, who lives near Queen-square, of two distorted feet. The nurse who had the care of this child became acquainted with a poor woman, who had a child in the same situation, and, knowing of my success with her charge, advised her friend

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* Stating, as I do most decidedly, that the instruments used by W. S. in this case were *like* those which I should have used, *which are my own invention*, for which, as well as for the *use of which, I have obtained the King's Patent*, and for the pirating of *which I might have prosecuted this* GOOD YOUNG MAN, *if I had been so minded*, I shall shew how the *honest lad* might have obtained what little knowledge he had on the subject. An old woman servant, who had been in my family many years, and was at last discharged for misconduct, offered her services to him, and, as she was no doubt thought to be a most valuable acquisition, was accepted. Having been several years in my house, she had seen many things laying about, and had occasionally been admitted into the room while I was dressing a poor patient. Having thus acquired an immense stock of knowledge, I have no doubt that she faithfully communicated the whole to her new master. Whether he had any better ground to establish his project upon, I shall leave him to prove whenever he is disposed to do so.

friend to apply to me. On hearing my name, this poor woman loaded me with execrations; said her child had been under my care a long while, without receiving any benefit; that I had drawn money from her till she could afford to pay no more; and she was obliged to desist, with the loss of her money, the loss of her time, and the additional mortification of having her child as much a cripple, as if no attempt had been made to relieve it. This information was conveyed to me. I had never seen the woman or her child; and, as my character was thus violently attacked, by a person, and for a cause of which I had not the least knowledge, I resolved to investigate the matter fully. I found the woman had been advised to apply to THE Mr. Sheldrake who had discovered a method of curing the club-foot, &c.: she applied to W. S. and understood that he was the person she was advised to employ; she therefore continued her child under his care, till she found it necessary to withdraw in the manner I have related.

Dr. C. to whom I have been well known for many years, and to whom I am indebted for many recommendations, gave me the address of a lady who wished to consult me; he desired that I would go immediately, as she was impatient, and he had promised to send me the day before, but unavoidable engagements had prevented him from calling on me. I went, and, to my astonishment, learned that W. S. had been there before me. The lady was impatient; finding I did not come so soon as she expected, sent her servant to fetch me. This servant had been told there were two persons of the same name; for this reason she was particular in her enquiries, and was told she was certainly right in her application, as Dr. C. frequently sent patients to him, W. S. and was at that time employed in attending his wife. This explanation appeared so satisfactory, that he was ordered to wait on the lady, received his orders, and no doubt was exulting in his success, when my appearance spoiled his sport. I do not believe that Dr. C. ever recommended a patient to W. S.; he certainly did not recommend *this* one, or he would not have given me the directions to wait on her himself. Upon full explanation, W. S. was discharged, with no other recompense than he could derive from the detection of his *very honourable* practice.

I re-

I received a letter from a lady I had known many years, in which she reproved me, in very strong terms, for neglecting some business which, she said, I had to do for her. I was surprised at this, as I had not heard from her for some time. I called upon her in consequence, and she was as much surprised at seeing *me*. She said, that some time before she had directed a letter to my house, as usual (which letter got into the hands of W. S.); but finding a stranger wait upon her, she enquired for me: the answer she got was ambiguous, but she understood from it that I was either dead, or had retired from business, and that the person she saw was my successor; of course she gave him her orders, but had not seen him since. This induced her to write the second letter, which got into my hands, and led to an explanation. She was much provoked at his baseness, and wrote a letter, in which she required him to deliver the articles he had taken to alter for her into the hands of my servant, who was the bearer. I accompanied this with a line from myself, in which I cautioned him seriously against a repetition of such conduct. He refused to restore the article claimed, and applied very coarse terms to the lady who had discovered her mistake. My letter contained a strong reproof, but it was under cover to himself; it was intended for his use, and he made his own use of it, by detaining my servant, calling his own together, and reading the letter aloud in midst of the whole assembly, reviling me at the same time with every foul epithet his vile imagination could suggest.

A lady, whose child had been under my care for some time with an umbilical hernia, wrote me, by her servant, to send her some new bandages *like those which she had had before*, and, that no mistake might happen, sent one of the old bandages for a pattern. The servant, by mistake, delivered the order to W. S. who took it, and sent a boy with a bandage totally different from the pattern, accompanied by a bill and receipt, and with positive orders not to leave it without the money. Such a message from me justly surprised the lady, and induced her to examine the bandage: she then discovered the difference, and, by examining the messenger, her servant's mistake. The boy, however, was true to his master's interest, and was equally unwilling to take back the bandage, and return without the money; though he was, at last, compelled to do both. The lady then sent for me. It was evident there was no *mistake*, as

W. S.

W. S. must have known, from the lady's letter, that he had never been employed by her ; from the bandage which was sent as a pattern, *that he had not supplied her with it* ; and he did not even attempt to execute the order literally, by making bandages *like the pattern sent*, though he dared to send a bandage different from those that were ordered, and *forbid his boy to return without the money for it.* I therefore advised the lady to write and desire that the pattern bandage might be returned by the bearer ; she did so, and the letter was delivered by my assistant. W. S. reviled the lady in very gross terms, and refused to return the bandage ; it was indeed of no value, any farther than as it served to mark the decency, the integrity, and the honesty of his conduct in the whole transaction.

A gentleman at Beverley, in Yorkshire, had a daughter who laboured under a distorted spine : he was advised to bring her to London, and put her under my care. He came to London, and knowing that I lived in the Strand, he came to seek me, and by accident he applied to William Sheldrake. It cannot be supposed that I should know what conversation past ; but the result was, that W. S. was engaged to the patient. He fixed a time to wait on her, but did not attend : messages were sent, but still no notice was taken. In this manner almost a fortnight elapsed, when this gentleman, being here with his family for no other reason than to get this assistance for his child, anxious for her welfare, and stung with resentment at the negligent manner in which he had been treated, wrote a letter expressive of his feelings, which he directed, Mr. Sheldrake, Strand. This was sent by his servant, who brought it to my house, and supposing by the address it was intended for me, I opened it. As the subject of this letter was like many similar accidents which I had known, I wrote to explain the relative situation of W. S. and myself, and suggested the propriety of ascertaining whether he had not, in his first application, addressed himself to a person he did not mean to employ. Mr. B. called on me in consequence, and, on mutually explaining some circumstances, he was convinced that he had been mistaken ; he therefore discarded W. S. and the patient was put under my care.

These anecdotes are selected from a large number of similar ones that have come to my knowledge, but these are sufficient to prove the facts I mean to establish. There is

is but *one* conclusion can be fairly drawn from them, and that I shall not take the liberty to point out; but there are three inferences may be drawn from them by persons who have different ways of thinking, upon each of which I shall say a few words hypothetically, without attempting to ascertain which is the truth.

First, it may be said, that although W. S. had not the least qualification for any thing but the trade of a common truss-maker, *so long as I had any knowledge of him*, he MAY, *since that period*, have qualified himself for very superior pursuits. It is possible that he MAY *have done so*, but, as I have no knowledge of the fact, I cannot speak on the subject. Still, however, I am entitled to observe, that, *if he has so qualified himself*, if he has acquired any skill, on any particular subject, that may distinguish him from the common herd of workmen who attempt to make trusses, he has manifested a strange obliquity of understanding, in not making public the fruits of his knowledge upon those subjects which have been the objects of his study, and thus fairly stating his claim to the reputation that would follow his success. Such would be the practice of most men of talents; but I have never learnt that he has done this, though the preceding anecdotes will prove that he has done things which very few men of inferior talents or character would think of practising.

Secondly, it may be said, that W. S. may have projected some method of curing distorted limbs, which is different from mine. This is *possible*, but there are some obstacles to be got over before this doctrine can be admitted, viz. why *did* he use a practice similar to that which he might have learned from my discarded servant, in the first case I have related? and why *did he not* cure the second case that I have shewn was entrusted to his care? When the nature of his practice and the extent of his success upon this subject is publicly known, his reputation, so far as relates to it, will be fully established. Till that period, the facts I have related will stand for judgment, without the least reflection from me to accompany them.

Thirdly, it may be suggested by some sceptical people, that it is possible W. S. may remain, so far as relates to knowledge, talent, and integrity, just as he was at the time I ceased to have any knowledge of him; that, feeling

his own inferiority, he may have fixed himself in the same street with myself, and cunningly lain in wait, in hopes that many who did not know there were two persons of the same name, and, *nominally*, in the same employment, would by this means fall into his hands; and, if *they* do not take the trouble to ascertain whether *he* is the person they meant to employ, the maxims of the world will excuse him for making his own advantage of them. That such doctrines are held by some people, I know perfectly well; but not being skilled in casuistry, I shall not dilate on the propriety of such conduct, though I may form my own opinion, and leave every one else at liberty to say what they please on the subject.

I have been compelled, much against my inclination to explain these particulars, in order to preserve myself from the injury that I must continually suffer in consequence of such practices as I have related; injury that originates in the baseness of others, and, however it may be intended, must affect my reputation more than my property. It is evident, that if Mr. B. of Beverley had not discovered his mistake, he must have returned home, and made, to my friends in that part, a very unfavourable report of the conduct of that person whom they had recommended to his notice. This must have degraded my character in their estimation, and, in all probability, prevented them from favouring me with any recommendation in future. It is equally evident that the woman, whose child had not been cured, was applying all her censures upon that occasion *to me*, though I had no knowledge of the subject; and, if the mistake had not fortunately been discovered, might, in time, have materially injured my reputation in her small circle; and any other person, having made the same mistake, and met with the same disappointment, might very unjustly, though without any malevolent intention, do me inconceivable mischief, by propagating false reports of *me*, supposing me to be the person by whom they have been improperly treated, although I, in fact, should be innocent of such transactions. I trust, therefore, I shall be excused for having related these anecdotes, to caution those who may be induced to seek for the author of this work not to be misled to apply to W. S. who, I believe, will not be very forward to inform them of their mistake.

The same motive will likewise excuse me for mentioning another subject, which otherwise it would be needless to introduce. The nature of my professional engagements has made it necessary to change my residence to a different situation: my manufactory and warehouse will remain at No. 50, in the Strand, where I have long resided, and where all possible attention will be given to every order received; but as my professional engagements necessarily confine me to my own dwelling house, it is hoped that all who would prefer to communicate personally with myself instead of an assistant, will direct their commands to me in this place only.

July 1, 1804. T. SHELDRAKE,

NO. 5, MONTAGUE STREET, RUSSELL SQUARE.

The following extracts from the reviews and other periodical publications contain the opinions of the editors of those publications upon this work.

Every "attempt," from a man of reputation, "to establish rational principles of treating a disease, that has "been too much abandoned to the practice of quackery," must necessarily prove acceptable; and the title of the present work sufficiently explains its purport.

Gentleman's Magazine, June, 1803.

The author of this pamphlet is well known to gentlemen of the surgical profession, by his ingenious mechanical contrivances for counteracting and removing deformities. Ruptures are among the number of those local complaints which require the aid of mechanism; and of late years various modes of applying the requisite degree of pressure by means of trusses to the affected part, have been suggested. The principles on which these have been constructed by different inventors or improvers, are examined in this treatise, and their defects and advantages pointed out. The elastic truss is that which he prefers in most cases. There are several plates in illustration of the author's remarks.

British Critic, September, 1803.

Mr.

Mr. Sheldrake is a humorous author, and we have more than once been induced to smile at his quaint conceits and singular stories. He offers, however, some sound sensible advice, and we would recommend all those afflicted with this very distressing complaint to attend to his directions.

Critical Review, August, 1803.

Mr. Sheldrake considers the declaration of an ability to make such trusses as will invariably suit all cases, as an instance of gross empiricism. He therefore takes considerable pains to convince such as may be interested in the subject, that it is necessary to obtain early and effectual surgical advice on the nature of their cases; and to employ, in procuring a truss, the labours of such as may be able to adapt it to the particular formation of the parts, and other attendant circumstances. The elastic circular truss is that which the author recommends, and it is particulary required that it should be strong enough to keep up the rupture, yet not so inflexible as to inconvenience the body, &c. &c.

Monthly Review, October, 1803.

For the present work the public is indebted to the author of a very useful work, entitled, "A practical essay "on the Club-foot, and other distortions of the feet and "legs of children," which has been well received. The present appears to us to be equally useful, and well deserving of the attention of such as are afflicted with ruptures, or have relations in that situation.

Tilloch's Philosophical Magazine, vol. xvi.

Lately was published,

A practical Essay on the Club-Foot, and other Distortions of the Legs and Feet of Children, intended to show under what Circumstances they are curable or otherwise; with Thirty-One Cases that have been successfully treated, by the Method for which the Author has obtained the King's Patent, and the Specification of the Patent for that Purpose, as well as for curing Distortions of the Spine, and every other Deformity that can be remedied by mechanical Applications. By T. Sheldrake, Truss-Maker to the Westminster Hospital.

The following account was given of the above work in the *British Critic* for October 1798:

"In the 8th vol. of our Review (p. 199) we gave an account of this author's treatise of distortions of the feet, in which the superiority of his method over all that had been before known and practised, seemed to be clearly ascertained. Further experience has shown the justness of the principles on which he proceeded. In the present volume he has given the history of thirty-one cases, in which his method has proved successful, many of them attested by persons of so much respectability, as leaves no room to doubt they are fairly stated. As various impositions have been practised to deprive the author of the credit and emolument to which he is justly entitled, he has taken out a patent for his invention; the specification for which is here published, accompanied with engravings respecting the machines he employs, as well as different kinds of clubbed feet, and of other distortions of the trunk of the body and of the limbs, to the cure of which his instruments are adapted."

From the *Analytical Review* of the same month.

Sheldrake *on the Club-Foot.*

"Distortions of the feet are so frequent and so distressing, that every rational attempt to remove them deserves to be examined with proper attention. The author of this essay, though not a professional man, offers a mode

of treatment in these cases, that has many circumstances to recommend it, and which is supported by the successful results of different practical trials. Why surgeons, who are acquainted with the anatomical structure of the parts, have not, by availing themselves of mechanical science, treated deformations of this and other kinds on philosophical principles, we are not enabled to say; but certain it is, that they are rarely undertaken by persons thus educated.

"The author of this essay presents his plan of treatment fairly to the notice of the professional inquirer, and claims his regard on these grounds.

Pref. p. ii.—"The situation," says he, "in which I was bred, having given me numerous opportunities of "seeing these diseases, in all their varieties, and of seeing "they were always treated in a way from which little be- "nefit was derived, naturally directed my mind to the "subject; and the nature of my professional education "and pursuits, during the last twenty years, having ena- "bled me to consider them in a way that had escaped "the observation of others, and to make numerous expe- "riments, in hopes of being able to cure them, I at last "succeeded in some cases, in an eminent degree. An ac- "count of these cases was published several years ago; and "the attention that publication excited, procured me "numerous opportunities for pursuing my enquiries on "this subject, the result of which will be found in the fol- "lowing pages."

In a former work*, of which the present would seem to be a continuation, Mr. S. showed what had been done by other practitioners with a view to remedy these deformities.

Pref. p. iii.—The present essay "contains the his- "tory of some cases, which were placed, with unlimited "confidence, under my care, and in which I was, *there- "fore*, perfectly successful. And, as I knew I must en- "counter the scoffs of incredulity, the doubts of scepti- "cism, and the insinuations of those who might be en- "vious of my success, I had the precaution to request, "that they might be shewn to gentlemen in the profession of

* See our Rev. Vol. xxv. p. 34.

" of surgery, whose knowledge, judgment and integrity, " were unquestionable, and who would, therefore, always " ascertain whether what I attempted was rational, and " what degree of success attended my efforts. The un- " biassed opinions of these gentlemen are added to the " history of each case, and will form a mass of incontro- " vertible evidence to the truth of the facts."

" After describing fifteen cases, in many of which his method of management completely succeeded, he comes to the circumstances that render the club-foot curable, or otherwise. In considering this part of the subject, he finds it necessary to inquire into the anatomical structure of the parts concerned, and from the examination of the bones in these cases of disease, he attempts to prove,

P. 87,—" That before the age of two years, the indi- " vidual bones of a club-foot are not distorted in any man- " ner; that as far as the bones are concerned in the dis- " ease, it is only by improper combination; that after the " age of two years, individual bones become deformed, " according to circumstances, which vary in different " cases; but which do not, in all, render the disease in- " curable. I shall now proceed to examine the condition " of the ligaments, in various stages of the disease, in order " to discover what alterations must be produced in them, " in order to effect a cure."

" The ligaments and muscles are examined in the same way, and several practical deductions laid down. From the whole these conclusions are formed,

P. 135.—" That three distinct operations are requi- " site to cure this deformity; first, to reduce the bones " to their natural position, and natural form, if the " patient's age has occasioned any malformation to take " place; secondly, to produce extension of any muscle " that has actually been contracted, or seems to be so " from the position and consequent inactivity of the foot; " and thirdly, to keep the foot bound in its natural posi- " tion, till those muscles which have, from the circum- " stances of the disease, been weak and inactive, perfectly " recover their tone and power, when, and when only, " the cure will be complete."

" I may likewise be permitted to conclude, from " what has been said, that every case of this disease may " be perfectly cured, before the patient is three years " old; that after that age, some may soon become in-

curable;

" curable; but that others may remain in a condition to be " cured, till the age of ten, eleven, or twelve years old, " and even to much later periods of life."

" These observations being made on that species of club-foot that occurs before birth, the author comes next to those which happen afterwards. Here he also offers many remarks, and gives different practical directions. We have likewise some cases in illustration of the positions. In recent distortions of the knee-joints, Mr. S. tells us,

P. 174,—That " two operations are requisite to " effect a cure, viz. to replace the bones in their natural " relative position; and to retain them there, till the liga- " ments and tendons connected with the knee-joint, have " recovered their natural power of supporting the weight " of the body properly on the legs.

" In recent cases, where the distortion has been " brought on suddenly, or at least quickly, by debility, " the reduction will be easily effected; for the same debi- " litated state of the parts that has occasioned them to " give way, will not oppose any obstacle to any rational " attempts to return the legs to their natural form, and " and then time, with the assistance of cold baths, &c. " will enable them to recover, perfectly, their natural " functions. But when, from length of time the disease " has existed, age of the patient, or any other circumstance, " the parts have become rigid or contracted, it will require " considerable caution to reduce them to their natural " position; but still it is possible to do so.

" As the degree of relaxation requisite to produce " this distortion is not great, so the degree of rigidity or " contraction necessary to retain it in its worst form, is " not greater than the relaxation which occasioned it. " From this view of the subject, and from what we know " of the effects of mechanical action upon tendinous con- " tractions, it is not too much to conclude, there are " few, if any cases, even in adults, that are absolutely " incurable; and from a knowledge that the mode of " treatment I have invented may be adopted to every pos- " sible case, it would, perhaps, not be unwarrantable to " conclude, that every case, which in its nature is not " incurable, may be cured by it."

" As the real value of every discovery or improvement is shown by the practical result, we have little hesitation in saying

saying, that if Mr. S.'s method of managing the distortions he has here described be so completely successful as he assures us it is, it must be of much utility." A. R.

A few remaining copies of this Work may be had at the Author's house, No. 50, Strand.

He is preparing a Second Edition for the Press, which will be published during the ensuing winter, with an Appendix, containing the history of cases which have been successfully treated, in patients at various periods of life between the ages of three and fifteen years.

The Appendix will be sold separate, to accommodate the purchasers of the former edition.

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Other diseases may be mistaken for ruptures, though the resemblance is not so perfect but that they may, by the experienced surgeon, be distinguished from each other: it is of the utmost importance to patients that this should be done; because diseases, that are different in their nature require very different treatment, and if the mode of treatment that is proper for one, should, through mistake, or from worse motives, be adopted in treating another disease, it will frequently be productive of fatal consequences. It is known that empirics and pretended rupture-curers have mistaken ruptures for other diseases, and other diseases for ruptures, and have actually destroyed their patients by the mode of treatment they adopted in consequence of such mistakes.

The parts which form the inguinal rupture come out of the abdomen through the aperture in the tendon of the obliquus externus muscle, in the same direction with, and upon the spermatic vessels in men, and upon the ligamenti uteri in women: it commonly forms a small tumour in the groin at first; but, if neglected, it descends gradually into the scrotum, in the one, and the labia in the other sex: sometimes violent exertion will produce a large rupture, and instantaneously force it down into the scrotum. At its first appearance in the groin, this rupture is frequently mistaken for a bubo, but, as it increases in size, it assumes a different appearance, and may be confounded with other diseases.

If the inguinal rupture is composed of omentum only, it will feel flabby, unequal, be easily compressible, and, at first, is generally free from pain; but, as a greater portion of the omentum descends, it will, by its connexion with the stomach, sometimes create nausea, and a desire to vomit, even when there is no stricture. The varicocele is sometimes mistaken for an omental hernia; but the attentive observer will easily discover the difference: the varicocele being a relaxation of the spermatic vessels, is inseparably connected with the testicles, but the testicle is generally to be felt distinct, and is easily to be separated from an omental hernia, even when that hernia is not returnable; the swelling formed by a rupture may always be traced up to the aperture through which it descends from the abdomen, but, the varicocele is seldom, if ever, extended so high; if a rupture is returned into the abdomen, and the hand carefully applied upon the part, it will not descend again while that application is continued; but if a varicocele is treated in the same manner, it will return the

moment the patient is in an erect posture, notwithstanding the hand is applied so carefully that nothing can have descended through the ring; which must have been the case if it had been a true rupture; so that, on account of these various circumstances of the two diseases, none but ignorant or inattentive persons can mistake them for each other. If a truss is applied upon a patient who has the varicocele, the application will increase the disorder.

The inguinal hernia is, when in its incipient state, sometimes mistaken for a bubo; in its more advanced stages it has often been confounded with the hydrocele, or watry rupture; but the hydrocele has more frequently been mistaken for the true rupture, notwithstanding the difference is so manifest that it is difficult even for a novice in the profession to mistake one of these diseases for the other; indeed, there is reason to believe this mistake is frequently made through craft, rather than ignorance, because the operation for the palliative cure of the hydrocele is simple, and the empiric, who imagines he can perform it, may, by so doing, gain an opportunity to boast that he has performed the radical cure of a true rupture where no such disease existed. Enlarged glands are sometimes treated as ruptures, and from the same laudable motives*.

* In October, 1783, a gentleman applied to me, and gave the following account of himself: He had, for many years, had a swelling in his left groin, but, as it had never given him pain or uneasiness of any kind, he neglected it till, accidentally reading some essays on the treatment of ruptures, he was so effectually frightened by that performance, that he immediately came to London and applied to the author for advice. This celebrated personage told him it was a rupture; that it would be necessary to apply bandages, and he likewise offered to perform the radical cure: a truss was applied, and the patient directed to call frequently. It was about a fortnight after this time when I saw him; he told me the swelling had continued invariably the same; it was down at the time, and had been down ever since the truss was put on; he was uneasy in his mind, but as, from the operator's behaviour, he entertained a bad opinion of his abilities and a worse of his honesty, he did not go to him again.

Upon examination, I found a tumour not so large as half a pigeon's egg, firm to the touch, and quite immoveable from its present situation: the patient said it was very small when he first perceived it, it had increased gradually from the time of its first appearance without being once painful, nor had it ever returned into the abdomen: he likewise assured me it could not be the effect of a venereal complaint, as he had never had that disease, there was every reason to believe it was an enlarged gland; I told him so, gave him the reasons upon which my opinion was founded, and at the same time recommended it to him if

Ruptures are sometimes connected with, as well as mistaken for, other diseases: an intestinal hernia and a hydrocele may exist in the same patient, and on the same side; an omental hernia and a varicocele have been found under the same circumstances: this case requires very delicate treatment, because it is well known that pressure will increase the varicocele, and pressure is absolutely necessary to keep up the rupture.

The femoral rupture passes out of the abdomen under Pouparts ligament, and nearly in the same direction with the crural artery: it forms a tumour in the upper and forepart of the thigh; it is, on account of its situation, more difficult to reduce, and more troublesome to retain, than it is to perform the same operations on any other kind of rupture: it is, for the same reasons, less frequently cured in a radical sense, and therefore it is fortunate for patients that it occurs but seldom in practice.

The exomphalus, umbilical, or navel rupture derives its name from its situation; and, like other ruptures, generally contains a portion of the omentum, of the intestine, or of both; though other viscera have sometimes been found in them: it is not so frequently strangulated, when in its incipient state, as other ruptures are; though to patients, who labour under it, it often proves fatal if not treated with propriety.

Infants are frequently troubled with navel ruptures, but, by the skilful application of a proper bandage, are generally cured in a short time. Women, particularly those

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if he had any doubts remaining, to apply to Mr. Hunter, or any other eminent surgeon, who, I did not doubt, would confirm what I had said: he declared himself perfectly satisfied, and said he should submit the treatment of it to the surgeon he usually employed; I saw him no more.

As this empiric exulted over one of his brethren who was justly punished for defrauding and maltreating a patient, it will be fair to apply his own mode of reasoning upon that, to his own behaviour upon this occasion. Either he believed it was, or he knew it was not a rupture:

As he has repeatedly assured the public that *he alone understands the nature, and proper methods of treating ruptures*, he cannot be admitted to plead *ignorance* on this occasion, however justly he may be entitled to that qualification; ergo,

He knew it was not a rupture: and,

Knowing the disease was not what he described it to be, why did he apply a truss, and undertake the radical cure of a rupture?

It could only be to defraud the patient of a sum of money under the pretence of curing him of a disease which he knew did not exist!

those who have had children, are most subject to them: it is sometimes found in men who are advanced in years, though but seldom, if ever, in those who are not past the prime of life. The greatest number of those who are troubled with this kind of rupture are of the female sex; but there are at least thirty men who have the inguinal and femoral ruptures, to one woman that has the same diseases.

The ventral rupture may appear in almost any point of the fore-part of the belly, but as Mr. Pott observes, it is most frequently found in, or, between the recti-muscles: it is commonly occasioned by violent blows, it is a disease that seldom occurs, and it is, of all the various kinds of ruptures, that which is least liable to prove fatal in its incipient state: because the aperture through which it passes has but little power to contract itself and occasion a strangulation while the rupture is small; but, if neglected, the rupture will become large, and irreducible, and, at that period, frequently proves fatal. Many, who are said to die of mortification in their bowels, have that mortification brought on by old, neglected, ventral and umbilical ruptures.

The hernia congenita * is always produced in infants, and requires particular attention on account of its importance as a rupture, but more on account of its connexion with the testicle, which may be, and very frequently is, injured by improper treatment; several patients are known whose testicles have been, and now necessarily must be, confined within the abdomen, or at least prevented from descending into the scrotum by trusses applied, either through ignorance or want of principle, by that empiric † who has presumed to insinuate that all medical men are ignorant of the proper methods of treating ruptured patients.

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* This rupture is peculiarly circumstanced, because it comes in immediate contact with the testicle. For a particular description see Mr. Pott's Treatise.

† This worthy personage was recommended to a nobleman whose son was supposed to have a rupture, and, according to his usual custom, he applied some trusses: an eminent surgeon was afterwards called in, and, to the astonishment of the family, proved the child had not a rupture, but that the empiric had, by applying his trusses improperly, confined the testicles in the groin. Many other cures are known in which this immaculate rupture curer has performed the same operation.

Many diseases are the consequences of particular modes of living, and, therefore, are confined to particular classes of men; but this is by no means the case with ruptures, for, no person, whatever may be his situation in, or time of life, can be said to be free from the danger of getting a rupture: but, though every man is liable to have ruptures, all men are not equally subject to them: those whose situations oblige them frequently to make sudden and violent exertions, and those whose constitutions are weak, or bodies debilitated, are known to be more frequently troubled with ruptures than the rest of mankind.

It has been asserted, by various writers, that the laborious part of mankind are most liable to ruptures; the truth of this is doubtful: for in very extensive practice for many years I have observed, that the number of those in the middling and upper walks of life greatly exceeds the proportion of those in the more laborious stations; and a small degree of attention to the causes of the disease will prove, in theory, that the contrary should be, as well as experience proves, in practice, that it is the fact.

The various causes of ruptures may be reduced under two distinct heads; they are occasioned by sudden exertions; or they are produced without any exertion of the patient, and, therefore, they so frequently take place in people who are generally or partially relaxed.

This being the case, it is by no means surprizing that we find ruptured patients are, most frequently people whose situations in life place them above the necessity of submitting to bodily labour: such people, by violent, or by sudden and unexpected, though trifling exertions, frequently get ruptures; jumping, an unexpected stumble, the starting of a horse, drawing a cork from a bottle, and many, equally trifling accidents, will produce them: or, by being in a relaxed or debilitated state, they have them come on so gradually that even the patients cannot tell the time at which their ruptures first appeared; and they will afterwards increase to a considerable size, sometimes without being attended with any apparent danger.

Ruptures of this kind, however, generally prove more pernicious in the end, because they are frequently neglected till they become incapable even of the palliative cure, and they continue to increase till they frequently destroy the patient. It is, perhaps, on account of the relaxation produced by the climate that the gentlemen in the West-Indies are peculiarly subject to ruptures; in the

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southern parts of Europe, too, ruptures are, perhaps for the same reasons, more common than they are in England: I am informed that, in Italy, ruptures are so common, and the trusses made for the palliative cure so imperfect, that numbers of the people who are far advanced in life have them to an amazing size, and, not unfrequently, retire into monasteries to end their days, because their ruptures render them almost incapable of labour, and ever of taking moderate exercise.

But notwithstanding the lower classes of people, in this country, lead very laborious lives, they undergo a degree of labour, with little inconvenience, that men, who are not accustomed to the same kind of life, could not support themselves under without making the greatest exertions: the former are used to it from their infancy, their constitutions acquire strength proportioned to their labour, and they are not affected by many of those accidents that occasion ruptures in more effeminate men: their laborious lives form a kind of routine which they constantly go through with very little exertion, or, when obliged to exert themselves, their natural strength enables them to do so with very little danger; for this reason it is that we find the laborious part of mankind are not troubled with ruptures in so great a proportion as those of superior rank.

Still the number of labouring people who are afflicted with ruptures is very great. When laborious people have ruptures, they generally prove the worst cases that occur in practice; because, if they do not feel immediately the symptoms of strangulation, they, in general, either neglect them entirely, or do not procure effectual relief; and, in consequence of this neglect, their ruptures frequently increase to an amazing size, become incapable of the palliative as well as the radical cure, and very often destroy the patients. When a rupture is once formed, every, even the most trifling exertion, and almost every motion has a tendency to increase it; and, if it is not properly treated at first, will render it troublesome and irreducible; and the patient will from that moment be constantly in danger, without a possibility of being relieved, except by one of the most important operations of surgery.

It is well known that many of the worst ruptures are found among sea-faring people: because, the life of a sailor is not uniformly laborious; it is a life of alternate ease and violent exertion: as they are so often obliged to exert

exert themselves much beyond their natural strength, it is by no means surprizing that they should sometimes get ruptures; this generally happens when they are at sea and can get no assistance; as they are, besides, obliged to persevere in their labour, a repetition of the action that produced will continually increase the disorder: this is the natural consequence of neglect in *every case*, and therefore cannot be considered as a circumstance peculiar to them. For these reasons their ruptures are generally worse; but if an exact calculation could be made, it would, perhaps, appear that they are less frequent among sailors, * in proportion to their numbers, than they are among any other set of men, unless it should be supposed, that a very great number of them have the disease without being conscious of their situation.

A rupture may enlarge itself gradually, from the time of its first appearance, until it has attained to a considerable size, or, it may be produced instantaneously to a very great extent. If its progress is gradual, and it be an inguinal hernia, it will, at first, form a small tumour in the groin; this will gradually increase and extend itself into the scrotum; and will, if still neglected, grow to an enormous size. I have seen a patient with a double rupture; which extended the scrotum and skin of the penis so as to form one large sac, and obliterate all appearance of the particular parts.

This case could only have been produced in consequence of continual neglect, for, if it had been attended to at its first appearance, if the palliative cure had been judiciously performed, it would never have grown larger than it was the first day, and by persevering in the palliative a radical cure might have been effected; every patient who neglects even the smallest rupture is liable to have it increase to the same size with the above-mentioned, and he will be in danger of falling a sacrifice to his neglect, in consequence of the strangulation that may at any time come

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* In Sir John Sinclair's Essay on Longevity it is observed, "the "number of ruptured men among the in-pensioners of Greenwich "Hospital, on the 3d of May, was 161, or 1-15th, the number being "2,410: among the out-pensioners, amounting to 2,500, the number "was only about 50, or nearly 1-40th." As there can be no doubt respecting the accuracy of the above statement, and it is said that one person in ten throughout this country has a rupture, (by some the number is rated still higher) if there is no exaggeration in this statement, it is evident, that ruptures are less frequent among sailors than among the bulk of the people.

come on, or in consequence of various evils that may be occasioned by the viscera being removed from their natural situation.*

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* Perhaps every surgeon is convinced that the empirical author of some essays on ruptures has *invented* cases to shew the fatal consequences that are produced by neglecting ruptures: certain it is that he has related such cases as never did exist as he has described them; the cause that is once supported by falsehood will fall into discredit, and therefore we may conclude that he has *wilfully* done more towards prevailing upon patients to neglect their ruptures than all the *ignorant* rupture curers in London; to counteract the numerous falsehoods of this scribbler, and prove the importance of attending to ruptures that are to *appearance* not dangerous, I shall not advance any thing more merely upon my own authority, but I will produce a case from a publication of unquestionable authority, the Edinburgh Medical Essays, vol. 1. page 290:

"A gentleman about 63 years of age, of a gross habit, healthy constitution, and regular course of living, had from his youth been subject to an epiplocele: about the year 1722, his appetite for meat began to fail, and his body to waste; during his indisposition he had not much thirst, and was generally costive, till some weeks before his death that a looseness came, not excessive nor accompanied with gripes, towards the end of which, his stools had a mixture of some purulent matter and a very noisome smell: his urine for most part was reddish, in small quantity, and let fall a gross red ground; he never complained of any pain but what was occasioned by the piles, which went off in a week or two without blooding. About two months before his death he was sensible of a weight of his stomach, in which time also he observed the hernia to increase much, and was troubled with frequent belchings; the three last months of his illness he had great watchings: his pulse was full, strong, slow, and hard, and his breathing easy and free till a few days before his death.

"At the beginning of his indisposition he used no other medicine but some gently purging and stomatic bitters, fearing that vomits might increase the hernia; but his disease still going on, about the month of July he was prevailed on to take a vomit of emetic tartar, and after that several others, at due distance, and pretty strong, which brought up with much difficulty a quantity of tough, heavy, thick phlegm, by which he had some short relief; he used likewise bitter stomatic infusions with and without purgatives, and also such medicines as were proper to mitigate the most pressing symptoms. He used moderate exercise in the country, a regular diet, and asses milk; but his body still wasting, and his strength gradually failing, he died the 25th of October, 1723. Upon the 27th his body was opened.

"The first thing observable was, that upon cutting the teguments of the lower belly there appeared little fat, and the fleshy fibres of the muscles were almost entirely consumed.

"2dly. The abdomen being fully laid open there appeared very little of the caul, and that reached scarce so far down as the navel, except upon the left side, where more than the half of it had fallen down to the scrotum, and was attached to the lower part of the left testicle,

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A rupture may increase to a very enormous size, in a very few years; in some cases its progress will be slower, and, in others, it will never attain to a very large size; but, except the inconvenience arising from the bulk of a large rupture, the dangerous consequences, if neglected, are equal in every case, as a very small rupture has been known to prove fatal in less than a day. Sometimes, in consequence of a blow, or of very violent exertions, a large rupture will be instantaneously produced; such ruptures are, perhaps, more frequently cured than any others, because the sudden production of the disease, and the painful symptoms that often accompany it under these circumstances, will impress patients with a just idea of their

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the annulus on that side being dilated so as to admit likewise two or three fingers.

" 3dly. By this falling down of the caul, the stomach, which was very much inflated, and extremely thin and smooth, had been pulled out of its situation, so that the pylorous tended obliquely downwards almost as far down as the right side of the navel, and the gullet entered the stomach at an acute angle.

" 4thly. The liver was large, weighing about six pounds, and reached under the left hypochonder, taking up that part of space the stomach should naturally have possessed; upon its surface, and through its whole substance, were white steatomous swellings, as also several ulcers, especially upon the concave side.

" 5thly. The gall bladder contained a blackish bile, and the ductus choledochus was so large as to admit two fingers where it entered the duodenum.

" 6thly. The pancreas was schirrous, but the mesenteric glands were no ways indurated; these and every thing else in the lower belly appeared to be sound.

" 7thly. In the thorax the lungs were of a blackish colour, and the first division of the bronchi in the left lobe of the lungs, there was found a round hard body about the bigness of a filbert, outwardly as black as ink; but when the membranous cover was removed, appeared brownish, and was of a strong brittle substance, like to something he had once spit up in the time of his sickness.

" 8thly. The heart was extremely flaccid."

This case affords a striking proof of the necessity of attending to ruptures that are, to appearance, not attended with dangerous symptoms. The patient had had it from his youth, it had never been painful, and therefore had been neglected, till it adhered to the testicle, and consequently became irreducible; it increased in size till its action upon the stomach ruined the patient's health, and, in the end, was the cause of his death: these effects would not have been produced if the rupture had been attended to when in its incipient state; few arguments can be necessary to prevail on patients in similar circumstances to avoid the same fate by proper attention to, even the smallest ruptures.

their situation, and induce them to pay that degree of attention to it which can only secure them from the fatal consequences of the disease: a precaution that is too often neglected when it approaches in a more insidious manner.*

Stricture upon, or strangulation, of a rupture may be occasioned by the descent of a greater portion of the abdomenal viscera than had been down before, or, in other words, by an increase of the size of the rupture; it may be occasioned by contraction of the parts through which the rupture descends, or, it may be occasioned by the pressure of a truss which suffers the viscera to escape under it; as this is, perhaps, not unfrequently the case, it is of the utmost importance that every case should have a truss adapted to its particular circumstances, because, the patient's safety, and often his life, as well as all the hopes of a radical cure, depend upon the efficiency of that application.

When a rupture is strangulated, the parts become inflamed, the patient is attacked by sickness and vomiting, the intestinal canal, by its connexion with the hernia, is prevented from discharging its contents; the inflammation increases, and, if these symptoms are not removed in time, a mortification takes place, and death is the inevitable consequence. The time in which this event takes place is not the same in every case; a strangulation will sometimes prove fatal in a few hours, and patients will sometimes labour under it several days before its ultimate consequence is produced.

A rupture may become strangulated † at any period from the time of its first appearance; or, it may give the

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* Besides the dangers to which those patients are liable who have a rupture come on in an almost imperceptible manner, it is necessary to observe, that they are particularly liable to have a second rupture come on the other side, opposite to that which has been reduced and retained by a proper truss. I have seen this happen so often, that when a patient has got one rupture under the abovementioned circumstances, and has an apparent fulness on the other side, I always recommend the application of a double truss: and think myself justified in so doing, because when the approach of a disease is certain, it is more prudent to apply a prevention than to let it take place in order to render a cure necessary.

† The larger a rupture is, the greater will be the danger from strangulation; as the difficulties to be overcome will be in proportion to its size; but a rupture of the smallest size has sometimes been known to prove fatal within a short time after its first appearance.

patient no uneasiness for many years; the symptoms of strangulation may afterwards come on, and the disease prove fatal in a few hours. As, in such cases, adhesions will generally be formed, no relief can be expected except from the operation, which will be rendered more difficult, and its beneficial effects more precarious, by those adhesions; it is therefore evident, and cannot be too forcibly impressed upon every patient's mind, that no rupture, however trifling, or however destitute of painful or dangerous symptoms, it may appear to be, should be neglected: because it is liable to become strangulated at any moment after its first appearance; and the danger of strangulation producing fatal effects, will be increased in proportion to the length of time the disease had been previously neglected; or, if strangulation is brought on by improper treatment, the danger will be increased in proportion to the time that such treatment is submitted to. From what has been said, it is fair to conclude, that no patient who has a rupture, even of the smallest size, is free from danger while that rupture is suffered to come down; that continual neglect will render even the palliative cure impracticable, and, in that case, the patient must be almost entirely abandoned to the fatal effects of his disease; but, that if the palliative cure is judiciously performed while the disease is in its incipient state, the patient will be effectually secured from future danger, so long as that cure is applied.

Of the Cure of Ruptures.

Having thus attempted to give a general idea of the disease, its nature, &c. it will be proper to shew what may be done to cure it, or at least to obviate its most dangerous symptoms, and place those who labour under it in as much safety as the nature of their situation will admit.

Many opinions have been entertained with respect to the number of persons who are afflicted with ruptures; these opinions have, necessarily, been influenced by the experience of those who have advanced them; and, in some, perhaps, exaggeration has been occasioned by no very laudable motives; it is probable that the fact cannot be very accurately investigated, but, if the extent of my practice, for many years, can enable me to form a just opinion on the subject, I would say, as nearest the truth, that one person in twelve, throughout this country, is afflicted with

with a rupture: a very large proportion! Of these many never seek for professional advice, till accident unexpectedly makes them acquainted with their dangerous situation, but, many more, knowing they have the disease, and, supposing they are competent to judge for themselves of the remedy that should be applied, never seek professional advice at all; but commonly fall a prey to empirics of every description. It is to shew these the dangers they expose themselves to, to caution them against the artifices that are daily practised to deceive them, and to give them that information which they will not obtain from those to whom they habitually entrust themselves, that these sheets have been written, and, if their future effect should be equal to that which has already been experienced, I trust they will not have been written in vain.

To be told that he has a dangerous disease, for which no certain cure can be obtained, must powerfully affect the feelings of every man, yet such is the unpleasant information that every well-informed man must give to the patient who consults him about a rupture: he may add, that, by using proper means, he may certainly secure himself from the dangers that would be the consequence of neglect; prevent the increase of the disease, preserve his health, and continue as active, and for as long a period of time as if he never had had the disease; he may go farther and say, that out of a given number of patients who have ruptures, a certain proportion, perhaps one in ten, gets absolutely radically cured, they lay aside their trusses and never feel the least return of their ruptures; but no man in his senses will tell this or that particular patient that he is the fortunate one who will be radically cured, at least whatever may be his opinion as to the *probability* of such an event, he will not mention it with the same certainty as he would foretel the cure of almost any other disease. Such information must leave the mind of a patient in a very disagreeable state of suspense; and, it is not surprising that, before he will submit to the sentence so passed upon his case, he should imagine that he has not yet obtained the best advice, and resort to those whose promises afford him stronger hopes of success.

It is not discreditable to the older practitioners in surgery that they attempted the cure of hernia, it was their profession to cure diseases, of course this, as well as every other disease, was a legitimate object of attention. One method was tried, and failed; another was adopted, and with

with no better success; and thus every thing that could be suggested by conjecture, false theory, foolish speculation or mere guess, was alternately recommended, tried, and uniformly failed: as anatomy was more generally studied and better understood, a spirit of investigation led * some eminent surgeons to examine the state of the parts, and to demonstrate, in consequence of this examination, that a rupture could not be radically cured by any exertion of the surgical art. From this period, it became the general, incontrovertible doctrine of the profession, that those who have ruptures can only depend, with certainty, upon a palliative cure, and that a radical cure, when it does take place, is always the consequence of those means which are used to effect a palliative cure being regularly, uniformly, and perseveringly applied.

Such being the uniform and well-founded opinions of well-informed professional men upon this subject, those empiries, whose object is to prey upon the credulity of those to whom professional men cannot, from the nature of the diseases they labour under, render all the assistance they require, found that patients who are afflicted with ruptures were peculiarly adapted for their purpose; hence the public was annoyed by impostors, who pretended that a rupture was, *by methods known to them only*, as curable as any other disorder, &c. &c. but as the gradual extension of truth, by the exertions and perseverance of professional men has exterminated these, † there will be no occasion

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* No man was more eminent on this account than the late celebrated Mr. Pott, and of all the labours of his very useful life, none was, perhaps, more conducive to his reputation, or more serviceable to society than the publication of his treatise on ruptures; it threw a light on the subject which put an end to the confusion in which it was till then involved, and laid a foundation for the extermination of that host of impostors, who, under the pretence of curing ruptures defrauded, injured, and sometimes murdered those who placed themselves in their hands.

† An account of the practices of some of these men may not be without its use, as it may caution the unwary not to trust the promises of similar impostors should such ever again make this appearance.

One of the last was a Mr. Lee, he had been bred to surgery, and applied himself particularly to the treatment of ruptures, his first doctrine was that every rupture might be radically cured by an operation in some respects like the operation for bubonocele, or, as the common people express it, *cutting for it*; his practice was to perform that operation, not to relieve strangulated hernia, but to cure the rupture of every

occasion to enter into the detail of such facts as would prove the fallacy of those pretences that were used to defraud, under the pretence of curing the credulous and unwary, as it is now well known that the radical cure, when it does take place, is effected by the same means that are used to perform the palliative cure, it is time to proceed to that part of the subject.

Of the Palliative Cure.

When the parts, which have descended to form a rupture, are returned into the abdomen, and are there secured by a proper truss, that rupture is said to be palliatively cured, because the rupture does not descend so long as the truss is kept in its proper place: when the parts are restored to their natural state, so as to remain there, without the assistance of a bandage, the cure is said to be radical, or compleat.

As the cure of a rupture, in either sense, depends entirely upon the truss or bandage, that instrument becomes an object of considerable importance; much ingenuity has been exerted in constructing trusses in various manners; much imposition has been practised, under the pretence of selling new inventions of this kind; *so much indeed*, that since the extermination of the rupture-curing quacks, ignorant, unprincipled venders of trusses are the only empirics,

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every patient who would place himself under his care; and his practice proved the truth of his doctrine, for very many of his patients were *radically cured of all their complaints.* I know one gentleman who had been his patient: he had a large omental hernia, there was neither stricture nor adhesion; but as he was in the prime of life he disliked the thoughts of passing through life with a troublesome complaint, and therefore placed himself under the care of Mr. Lee, who divided the integuments, and hernial sac, *cut off almost all the omentum* that had protruded as well as the hernial sac, and only returned that portion which had protruded, and sewed up the orifice to close the sac. Fortunately he survived this operation; he is still alive, and from the time he got well of the wound to the present moment he has been obliged to wear trusses, so that he gained nothing by all the pain he suffered and danger he went through, but a thorough conviction that his rupture was incurable, and that he had run the most eminent risk of his life, by relying on the promises of an unprincipled villain.

The death of several patients, who were less fortunate than this gentleman, excited so much attention, that Mr. L. changed his plan, and instead of committing murder, was contented to be guilty of fraud, for the rest of his life he pretended to cure ruptures by the application of astringent washes, bandages, &c.

pirics, are the only persons who now prey upon the ruptured patient, who seems, by a singular fatality, to have been marked from the beginning as a perpetual victim to imposition and fraud. As this is the case, it seems to be desirable that so much should be said on the subject as will enable those who are interested to form a just opinion of it, I shall, therefore, enter so far into the history of these bandages, as will enable those to whom the subject is of importance to form a just opinion upon it. What is a proper truss? That is a proper truss for any patient which enables him to keep up his rupture *perfectly*, without suffering any injury, and with as little inconvenience as the circumstances of his particular case will admit of: according to this definition, any truss, however imperfect it is, or however defective the principles on which it is constructed may be, if it answers the purpose for which it is used by any patient, is to be called a *proper truss;* this definition, so far as it relates to any particular case is certainly just; for if a patient obtains that which is his principal object, if he keeps up his rupture, and if in so doing he accommodates himself to bear, and to feel himself comfortable under the pressure of circumstances which a professional man, reasoning generally on the subject, would call inconveniences or defects, it is certain that he could obtain no advantage by leaving the kind of truss he had been accustomed to, and adopting those which he may be told is different from, or better than his own: on the contrary, it is probable that the difference between that which he has been accustomed to, and that which he is prevailed on to substitute in its stead, would be unpleasant to him, and he must go through the disagreeable task of reconciling himself to the change before he can be as easy as he was before: as this would be so much pain and trouble incurred for no adequate end, it would be needless to persuade any one who feels perfectly satisfied with the truss he is accustomed to, to lay it aside for one that might justly even be called better.

On the other hand, if any person who has worn a truss of any particular kind should advance, that because HE is perfectly satisfied with it, it is the best and most perfect that can be used, notwithstanding substantial reasons may be given to prove it is defective in many particulars, his assertion would be too ridiculous to deserve a serious answer; but those who feel inconveniences from the use of trusses which they wish to avoid, or those who are beginning

ginning to use them will be glad to learn which is the best and most likely to answer their purpose; for their information a sketch of the history of these bandages, their progress towards perfection, and the variations that have been made in them will be attempted.

On reducing a rupture, and keeping the hand upon the aperture through which it had extruded, it would be found that the rupture did not return, so long as the hand was kept in that situation; but the hand cannot be always so employed, and this, perhaps, first suggested the idea of employing a bandage for the same purpose, the simplest bandage, and that which would obviously be first suggested on such an occasion, is formed by passing a belt round the body, and fixing a pad or cushion of some firm, perhaps incompressible substance between it and the aperture through which the rupture had protruded: it was expected that this contrivance would keep the aperture closed and prevent the extrusion of the parts; but a little examination will discover sufficient reasons to shew why it could not do so in the greatest number of cases in which it was adopted.

If a belt is firmly fastened round a body of regular figure and uniform substance it will press equally in its whole circumference; but this is not the case with that part of the body on which a truss is worn: even in the cae of a fat man whose body *appears* to be round, the bones of the pelvis form various projecting points in the direction of the truss, which, when it is fastened, galls those parts so as to excoriate the skin and give insufferable pain; this objection relates only to the uneasiness of such a bandage, but more forcible ones are made to its inefficacy.

The injury produced by a rupture is local, confined almost to a point, but the pressure made by a belt is uniform in the whole circumference of the body; to remedy this defect the pad is introduced to produce the pressure immediately on the part, but it does not do so to the extent that is necessary, and in many cases not at all. For example; if the body was hard, and the pad incompressible, it would keep the belt at a distance from the body where it lay between them; if the *belt was hard and incompressible*, as well as the pad and the body soft, then would the pad be forced into the aperture by the resistance of the belt, and answer the intended purpose so far as the patient could bear that kind of pressure: but in the case we are considering, the belt and that part of the body upon

which pressure is to be made are equally soft, and the pad being interposed, is merely kept in equilibrio between them: in very slight cases, or where the patient is in bed, or otherwise at rest, this may be sufficient; but it never was in any bad case, or where the patient required to use much exertion: the moment such a patient begins to walk, or make any effort, the rupture descends; if, in hopes of preventing, he fastens the bandage tighter, he produces pain upon the hips, &c. without obtaining the effect he desires. Some persons imagined they could obviate this defect by introducing spiral and other springs into the pad, which they said would produce more pressure immediately on the part: they only forgot to add, they would do so *when a point of resistance was found from which that pressure would be brought to act*; but so long as the belt continues of soft, unresisting materials, the spring is merely suspended between it and the body, and is liable to all the inconveniencies of the common pad; it has been tried, and exploded as totally inadequate to the purposes for which it is intended.

This being the case, it may be thought useless to enter into this disquisition on its defects: but it is necessary to observe, that though numerous variations of this kind of bandage were tried and exploded more than half a century ago, some persons at the present time, either not knowing, or not caring about this fact, having busied themselves in obtruding such things on the world *as new inventions*; it is not necessary to draw them from obscurity by more particular notice, but it is hoped, that this investigation of the general principle, which applies to them all, will enable those who are interested in knowing the fact to see why these pretended new inventions are not found to answer the expectations of those who are induced to try them.

The universal failure of those attempts that were made to support ruptures by bandage, either simple or with springs of various kinds in the pads, at last led to a farther improvement in the construction of instruments for this purpose, *viz.* to make that part which went round the body of some firm, unyielding substance, that might oppose an invincible point of resistance to the extrusion of the rupture, and thus effect the desired purpose: the contrivance hit upon, was to make that part, which goes round the body, of iron or steel so strong, that when fitted round the patient it made the pad squeeze so close upon the aperture,

aperture, that, it was said, it would be impossible for any part of the rupture to extrude: it is true that it would have been impossible, that a rupture should come down when supported by such a bandage, but it is equally true, that the pressure from these trusses is from its very nature so tormenting that *few patients could bear them at all*, and no one could wear them with any satisfaction: this induced attempts to diminish the pressure, and the consequence was, in such cases, a descent of the hernia which then was compressed under a strong iron bandage, and inflammation and all its terrible consequences produced *. Contrivances were attempted to vary and modify the pressure, but with no better success; in short, between the insufficiency of bandages of various kinds † and the torment of iron, (vulgarly at that time called) steel trusses, the situation of persons who were under the necessity of using them, was more generally deplorable than can now be imagined.

About the year 1733, some person in France invented a method of making trusses with a circular steel spring round the body, instead of the iron hoops which till then had been used; the improvement was important, and was soon so generally adopted, that, it is known from incontrovertible facts ‡, trusses were made upon this plan by

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* Agreeable to my plan I now merely discuss the general principle; which was not altered by any of these contrivances: they consisted of screws of various kinds, and other methods of turning the pads in various directions, but still, *when varied*, the pressure was always produced in the same way. It is needless to enter into a particular description of all these methods, but it may be proper to observe that many of them have been revived in the present time with all the pomp and parade of new discoveries. Compare them together, and let the *experience of the ancients demonstrate the merits of the moderns in this respect.*

† The curious reader will find in the Adventurer, a paper upon this subject; it relates to one Woodward, the last of the *bandage making* impostors, if we except old Lee who adopted the use and abuse of them after general clamour had driven him from his peculiar practice.

‡ In the Edinburgh Medical Essays, published, I think, in 1737, it is observed, that a paper is inserted in the Memoirs of the French Academy for the preceding year, which contains the description of a spring truss, which the author considers as a *new invention*, not knowing, says the Edinburgh writer, that *spring trusses are commonly used in this country.* This assertion *seems* to invalidate Blakie's claim; but, when it is considered that iron trusses were, at that time, commonly called steel, or spring trusses, it is evident that the Edinburgh writer did not understand the difference between *them* and the elastic truss, at that time newly invented.

I have

those artists in London who were best informed on the subject: in the year 1764, however, a Mr. Blakie, who had lived long in France arrived in London, and offered this his invention, as he called it, to the public notice and published a small pamphlet, in which he describes the principles on which these trusses were constructed: the public, however, was in possession of this invention before his arrival, and, as he was a man of much ingenuity, and more modesty than many who have since obtruded themselves upon the world, he shortly returned to the Continent.

From the first introduction of the elastic truss, till the year 1780 and 1781, no alteration whatever was made in the *principle* upon which trusses were constructed; new inventions, as they were called, were brought forwards, but, upon a candid examination it will appear, that these were either different modifications of form (this subject will be noticed hereafter) adopted by different people, or they were only the impudent attempts of ignorant unprincipled men to draw the eyes of the public on themselves: indeed the empiricism of which ruptured patients have always been the dupes, seems, from this period, to have taken a different direction: the labours of Pott, the Hunters and their cotemporaries had fully demonstrated the nature of the disease: this had, in fact laid a sure foundation for the destruction of quackery upon *that* subject; but, as empiries do not easily part with *profitable subjects*, those who wished to play upon the unfortunate of this description, found the application of trusses was the engine by which their operations must be carried on; we are, on this account, to find quackery with respect to ruptured patients is now

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I have not seen that paper in the French Memoirs which is alluded to by the Edinburgh writer, but I have seen, in a translation of select cases published by Cave, in 1750, a paper by Mr. de l'Aunay, with a plate, in which is described and represented an elastic truss, constructed upon the same principles as those made by Blakie, by others in England before him, and by every one since that time who has any just claim to skill or knowledge on this subject.

Whether Blakie or de l'Aunay was the real inventor, or whether the former only claimed the title upon his arrival in London, is a point that cannot now be determined: but it is certain that, however the fact may be, the invention was known in London *before* his arrival: it was, perhaps, generally adopted soon after the date of Cave's publication; as it was proved, on the trial between Brand and Reid, that elastic trusses were made in London so early as 1756. Blakie's pamphlet is dated London, 1764. Brand's pretended invention is dated Aberdeen, 1764.

now chiefly carried on under the pretence of applying new invented trusses, it is therefore proper to collect such information on the subject as may put the inexperienced patient on his guard with respect to it.

The elastic truss, instead of the simple belt of the common bandage, or the stiff iron circular of the old fashioned truss, has a circular spring which goes round the body; this spring is so formed as, by its re-action when it is properly adapted and applied to the part, to press the pad upon the opening through which the hernia has descended, and thus prevent its farther extrusion so long as the truss is in use: and it should be so modified at the same time that it does not cause any uneasy sensation in consequence of the variation of size in the abdomen which is continually taking place in respiration. It is this peculiar action of the elastic truss which Mr. Blakie had in view when he wrote the following passage.

" It has been said, that the most natural remedy for " ruptures is that of applying the hand to the part where " the pain is felt: but as that remedy cannot be perma- " nent, a bandage must be put on, not only to supply the " functions of the hand, but to exert a continual pressure " against the rupture, and thereby compel the parts which " form it to remain constantly in their natural place. " Such a bandage will adjust itself to every motion of the " body, without giving pain, and neither *gall the loins*, " *nor hips*, or any other *part it is in contact with.* 'Tis, in " short, a bandage that imitates the kind pressure of the " hand in all its degrees." (Blakie on Ruptures.)

This was the description of the original inventor, after he had had more than thirty years experience of the efficacy of his invention; after that invention had been generally adopted by others in this country; and, as the universal experience of all professional men of eminence for half a century since has proved the superiority of that principle over every one that preceded it, it may seem like waste of time to enter more minutely into this part of the subject: but when it is known that some attempts are made, to revive the use of those bandages which were exploded by the introduction of this; that these exploded bandages are most ignorantly or more impudently introduced as NOVELTIES by persons who attribute to the elastic truss those defects which it never can possess unless made by very ignorant men; but which are the inseparable companions of those bandages which they endeavour to revive,

revive, it becomes very necessary to investigate the principle of the elastic truss, the defects it really has, and those that are falsely attributed to it by those who may be interested in its depreciation, and incompetent to judge of its merits.

The elastic truss, then, consists of a circular spring which goes, in some cases, entirely round the body, but in others only in part; but, in every case it must go so far round as to form a solid rest or basis from which the pad is to act by pressing on the proper part: this pressure is made by the spring which is set in a form as nearly circular as the form of the part it is applied to will admit, and produces its pressure by contracting in a horizontal direction round the body, and by this means producing its full effect by pressing the pad directly on the part upon which it lies. If the truss be properly adapted, and skilfully applied, it will, in many cases effectually answer its purpose; but, if it is imperfectly constructed, or injudiciously applied, it will fail, and then the patient will be in a worse situation than if he had no truss. There are various modes of constructing elastic trusses, but by those who are conversant in the subject, the general principles on which they should be constructed are reduced to two. viz. 1st. They should be so constructed as to keep up the rupture of every patient effectually, and to be in every case as easy as is consistant with the circumstances of that case: and, 2dly, they should not only keep up the rupture effectually, but should produce so much compression of the parts as may, if it be possible, cause a permanent union and thus constitute a radical cure.

Of Timbrell's New Inventions.

Various objections have been made to the elastic truss; some fairly arise from defects in the principle upon which that instrument is constructed, and must act; others are the consequence of misapplication of trusses by ignorant men, and others originate with men who have a plentiful stock of ignorance of the subject, and are determined, if possible, to substitute some other article that will be more advantageous to *themselves*, however it may be to their patients. The former objections will be considered in a different part of this work, at present those which may be supposed to come

come under the latter head will be examined, and as these persons boldly proclaim the superiority of their peculiar bandages over that which they endeavour to decry, it will be perfectly fair to pursue the comparison which they have been forward to make, and by an accurate examination of their pretended discoveries, shew how far they are entitled to that notice they are so clamorous to obtain.

The first, on account of its actual insignificance, and the artifice and perseverance with which it is obtruded on public notice, is what is called *New Inventions, and Directions for ruptured Persons*, said to be written by a gentleman of fortune without any view to private emolument, and who merely publishes his discoveries to serve the unfortunate, and dedicates the profits of his pamphlets (which are charged enormously * high even according to the present price of printing), to *charitable purposes.*

It is a fact more creditable to the feelings than to the penetration of Englishmen, that when any claim is made upon their purses for the purposes, or under the pretence of charity, their hearts expand, and they willingly pour their wealth into the hands of those who shew them objects on which their benevolence may be exerted, without supposing that a knave may embezzle the money which they give for the most laudable purposes, or that an impostor may ask it for purposes to which they never mean to employ it. It is to this peculiarity of disposition that we owe the numerous establishments which are dedicated to the service of the poor, and would do honour to human nature wherever they existed, and it is from the same peculiarity that we see frauds sometimes successful which would not impose on the most credulous for a moment, if they had taken the trouble to examine the proposals that had been made to them by the plain standard of common sense: whether the work now under consideration is to be fairly included under either of those heads, may perhaps be determined by the following circumstances.

The author describes himself as an *independent gentleman*,

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* Fifty-two pages, very loosely printed, price 2s. Appendix, 37 pages, ditto, price 1s. 6d. but who would scruple to pay *so* much for the *work of a gentleman of easy fortune* when the profits are to be bestowed for *charitable purposes*, and he may save his own life into the bargain, by learning so much about ruptures and calico cushions, &c. &c. &c. ! ! !

tleman, who has suffered from a rupture, and having found the insufficiency of the methods usually employed, has invented, discovered, or adopted such as he has found effectual, and therefore, now *gives the fruits of his experience to the world merely for the benefit of unfortunate fellow sufferers, without the most distant expectation* of deriving any advantage to *himself* from the communication.

It is an axiom in sound criticism that no man is to be blamed because he has not done that which he did not undertake to do; or because he does not understand that which he does not pretend to be acquainted with: the author before us is to receive the benefit of that axiom to its fullest extent; he does not pretend to be a professional man, therefore it is not to be supposed that he understands all that a professional should know on the subject; but he does pretend to communicate important information which has eluded the grasp of all professional men, and which *he* has acquired by studying his *own case;* that case he has described; if truly, a professional man must understand the description and admit it is true, or prove its fallacy; and if an examination of the history of that case proves that its author has any knowledge of that which he pretends to describe, it may be necessary to enquire how far the conclusions he attempts to draw from it are entitled to farther notice.

He says (p. 2, 1st. edit.) " From my earliest remem-
" brance, I *recollect a particular formation in my left testes,*
" *which was in an artificial sac:* at the age of twenty two,
" riding on horseback, both the omentum and intestine de-
" scended into this sac, and *was* there incarcerated many
" hours with dreadful agony. I DID NOT THEN KNOW
" WHAT A RUPTURE WAS, my surgeon, in the country,
" who reduced it, sent me to a truss-maker in London,
" who was one of the best; he made an excellent *formed*
" truss. The late eminent Mr. Pott, surgeon, to whom
" the world will ever be indebted, inspected and approved
" the old mode of putting on this truss.

" I found this truss of little use; the thigh strap,
" which was of cotton, was not fixed to the hoop, it hitch-
" ed on a brass nob, and constantly slipped off. On the
" most trifling exercise the rupture descended; half my
" time was consumed in reducing it, and often in great
" pain. Above twenty times I have felt all the agonies of
" a stricture, particularly about three years ago in Dub-
" lin,

" lin, and expected my death for two days, preferring, " that, to the operation of cutting.

" Nausea, sweats, shiverings, cramps in the legs, en- " sued, death was my only prospect; when suddenly and " unexpectedly, *possibly from the fomentations used by my* " *surgeon*, the rupture became reducible, and as far as I " am able to form an opinion, a *novel case*, *happily for me*, " *occurred. The rupture was of that species*, called HER- " NIA CONGENITA; *and the* INFLAMMATION has, *as far* " *as I can judge*, DETACHED the *omentum* from the " testis.

" The omentum is now reducible; and since the im- " provements, the rupture never descends into the sac, " except when the truss is removed, and then it comes " down to a great size. So powerful are the combined " effects of my improvements that, with safety, I perform " the most violent exertions on foot and horseback, both on " the road and hunting."

This is the author's case, and a most singular one it is: he has *truly* said, (IF *the case is true*,) it is a NOVEL one, but whether it be *happily* so for him, may at present admit of some doubt.

I would ask, with all becoming gravity, HOW *he came to recollect that there was a particular formation in his left testis which was in an* ARTIFICIAL SAC, FROM HIS EARLIEST REMEMBRANCE, that is from the time he was a little *tiny* boy? Did he ascertain the fact by accurate comparison with every other little boy who was equally curious on the subject? Or did his mamma, who might have some natural, though no professional knowledge of these things, compare his left testis with such others as she was acquainted with, and fix an idea of the difference indelibly upon his sensorium at the time she nourished him with her milk, and thus give him all the benefit of intuitive knowledge without having recourse to any experimental enquiry? Leaving this knotty point to unravel itself, it may be sufficient to state the following few facts respecting Hernia Congenita.

The testicle is originally formed within the cavity of the abdomen; about the time of birth it descends into the scrotum carrying before it a portion of the peritoneum which soon closes round the spermatic cord, and thus forms the tunica vaginalis propria testis: if a child gets a rupture before that portion of the peritoneum has closed round

the cord it descends into the same sac, that is, the parts which form the rupture are in immediate contact with the testicle, and the tunica vaginalis propria testis constitutes the hernial sac. But, if at any after period, the rupture takes place, that rupture carries before it a distinct portion of the peritoneum which forms the hernial sac, and the testicle remains within its own proper tunica vaginalis: in other words, it is absolutely impossible that any person should have a hernia congenita, unless he got it at the time of birth or within a very short time afterwards. What then are the facts of this *novel* and undoubtedly *wonderful* case supposing it to have actually existed?

The writer at the *age of twenty two*, got a rupture by riding on horseback, *at which time he did not know what a rupture was:* all this may be true, and, if it is, proves incontestibly that it could not be the hernia congenita: whether he is a weak minded patient who has pored over books which he does not understand; till he has frightened himself into a belief that what he relates is true, or whether he is a person who writes with the less laudable design of alarming others it may not be easy to determine, but it is evident that the whole narrative is a collection of circumstances awkwardly put together in a way that might justly create surprize; and considered in this point of view, he certainly has gained his end: whatever the writer may be, the *idea of forcing or detaching the omentum from the testis*, was so conveniently horrid that he naturally endeavoured to make the most of it, though, except in *one* particular, he has not been very fortunate in the attempt.

One Novelty at least this gentleman has brought into notice: the Potts, the Hunters, and such foolish *people* as have undertaken to instruct young men in the profession of surgery, informed us that inflammation in parts which were in contact with each other frequently produced adhesions between them, and every well informed surgeon has uniformly believed this to be true; but W. H. T. Esq. has discovered that inflammation *separates parts that have adhered*, or, to use his own words, detached *the omentum from his wonderful left testis that was from his earliest remembrance placed in an artificial sac*†. And this wonderful

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* If we were disposed to be jocular on so serious a subject, we might ask *who* made the artificial sac, and *who* put the testicle into it?

derful discovery must work a great revolution in every part of surgery, for as every point of practice that is connected with inflammation is adapted to that principle which has been thought to be true, and W. H. T. Esq. has discovered that the reverse of that principle is the truth, it follows of course, that all the practice must be reversed, in order to accommodate it to the principle he has discovered.

As every writer is entitled to the benefit of his own corrections or repentance, it will be proper to mention that the preceding observations were made on the history of his case as it appeared in *the first edition*; in the second some alterations have been made, viz. he says nothing of his *earliest* REMEMBRANCE, and it is *very singular that he should have forgot in two years, what had made so strong an impression on him all the former part of his life.* Are we to believe, from this circumstance, that his imagination was stronger than his memory, and induced him to believe that he *remembered what had never existed in reality?* And that some better information that he may have collected since he has volunteered as a doctor for ruptures, has convinced him of the *prudence* of preventing others from recollecting this powerful act of his juvenile remembrance?

Instead of saying the *inflammation* has detached the omentum, &c. he says, in the second edition, the *irritation* has detached the omentum from the testis: as an admirer of new discoveries, I most fervently wish this is not to be construed into an acknowledgment that the forementioned discovery of the effects of inflammation is a mistake; yet what other interpretation will the passage bear? Does he mean to insinuate that as the omentum and testicle were most unnaturally joined together, their union was like that of an ill assorted man and his wife whose connexion could not be dissolved by gentle methods, who would not live happily together but were continually bickering, till at last, in a fit of *irritation* or violent passion they burst from each other with a resolution never to meet again.

If the reader should imagine that more attention has been bestowed on the history of this case than its importance merits, he must be requested to remember that the author PRETENDS to no more knowledge than his experience *in* this case will afford, *therefore* if there is a necessary connexion between the foundation and the superstructure it is necessary to probe this case to the bottom, to see if the facts of the case are of a nature to afford so

much knowledge as will enable the author, by virtue of *it* only to commence infallible doctor of ruptures, and corrector general of all professional men and others who may be any way concerned in the treatment of the disease, or whether the whole is a quicksand that will soon let the building, he endeavours to raise on it, sink into everlasting oblivion.

Of the case there will be, perhaps, but one opinion; it will therefore now be proper to examine what this Gentleman calls his NEW INVENTIONS, which he so strenuously claims for himself the merit of introducing to notice: these, he says are,

1st. That the circular spring, or "hoop part of the "truss, as he calls it, should be in a true circular line with "the pad," (p. 9) and not in any kind of oblique direction.

2dly. The thigh strap should be made of *wash leather, lined* with thin tapes to prevent its stretching; the end, adjoining the buckle to be of neat's leather, the thigh strap to be *sewn* with strong thread well waxed, to the hoop part of the truss; and buckled by a double tongued *buckle which he has invented* to the bottom part of the pad, and

3dly. A calico cushion, *invented by him*, and which he considers as an universal remedy for all ruptures.

He begins the first part of his subject by quoting the elegant adage "between two stools, &c." which he explains, by saying, "such is the unfortunate situation of the "wearer of trusses; the art of putting a truss on the hu-"man body *appears* so easy and simple as not to be con-"sidered as any art. *Few truss-makers are men of science*, "and SURGEONS HAVE NEVER SCIENTIFICALLY CONSI-"DERED THE SUBJECT*."

Those

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* The conclusion of his sentence, which is here added, that he may not complain of misrepresentation is "rules of science, of common rea-"son, and the immutable laws of motion have not been thought of. "Ruptures descend, and patients die." On this, as on the former occasion, I quote the *first edition* of the work, because, when a man deliberately writes for publication, he probably writes seriously that which is consistent with his real intention; but, when he corrects that which he has already published, he may be actuated by other motives, a desire to conceal that which he did not intend should meet the general eye, a fear to offend, or a hope to conceal his own ignorance, may tempt him to give a different

Those who have the means of knowing the secret history of many of those people, and of the mischiefs frequently occasioned by their ignorance and presumption, will readily allow that the first part of his assertion is true; but is it not singular, that in the present state of their profession, surgeons (i. e. no one surgeon) have never scientifically considered this subject? This is a charge laid against the whole profession, that they are ignorant of the proper method of treating a dangerous disease, that is as common as any that afflicts the inhabitants of this country; and who, it may be asked, has scientifically considered the subject, if gentlemen in the profession of surgery have not? the only answer to be drawn by fair induction from the insinuations of this person is, that no one but himself has *so* considered it; an answer that is equally *sensible*, modest, and TRUE.

Such is his introduction; he then proceeds in the following words: "The usual mode of wearing the truss is, "for no one reason in the world, but from an old custom— "to raise the hoop parts *on* the hips several inches *higher* "than the pad part, by which method a false line of action "is adopted, and of course a small pressure on the aper- "ture. The *hinder part of the truss is always put many* "*inches too high.*" It is not meant to insinuate that no individual has ever made or applied a truss in the manner that W. H. T. Esq. here reprobates, because it will shortly be proved that *one* person has done so, but it will be proved, that when he said that this was the *usual mode of wearing a truss from an old custom*, he said, what was not true. About the year 1764, one Brand procured a patent for a truss, *which he pretended was his invention*, and his trusses were always made to lay in a direct line with the pad round the body; Brand's son, afterwards, made trusses, always in the same manner: the old man prosecuted several persons for infringing his patent, but on the trial of these causes it came out that there was no one point either of general principle, or

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a different turn to what he had previously written. Thus W. H. T. Esq. in his second edition omits his elegant proverb, and his false and scurrilous reflection on surgeons, by which he puts himself in a dilemma of which he is entitled to receive the full benefit; if, when he wrote his first edition, he did not know that the insinuation contained in that reflection was false, he was too ignorant to write with propriety on the subject: if he *did* know it was false, he must have emitted it for purposes that render him too contemptible for notice.

or modification of principle, that was *new in* Brand's trusses; they were in every respect like those that were made by every person who made trusses at that time, and therefore Brand was non suited.

Here then is evidence that what W. H. T. Esq. says, *is the usual mode of wearing a truss from an old custom, was unknown*, and what he modestly brings forward as a new and effectual discovery of his own, which he intends shall root out the old custom, was the general, the invariable practice forty years ago, and an application to any person who is acquainted with the profession since that time, will convince any enquirer that it has been the general practice ever since; and a singular confirmation of this fact will be obtained from a quarter where it could be least expected.

Mr. Turnbull, who has attempted to establish a charity for the joint * benefit of the ruptured poor, and himself says †, " I think it necessary to mention one improvement, " which, in the course of my practice, I have been induced " to prefer.

" Those employed, in general, often produce consider-

" able

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* Lest, in this age of disinterestedness, it should be thought I bear hard on Mr. Turnbull, by insinuating that he had *any* regard to *his own* interest in this undertaking, I beg leave to produce the following proof.

To Mr. T. Sheldrake,

Sir,

As several of *my* friends have some intention to establish an institution for furnishing the ruptured poor of both sexes with *trusses*, we wish to know from the best calculation, what are the proportionate number of individuals ruptured in this kingdom—is it one person in 10, 15, or 20 ?

Knowing that you have paid some attention to this subject, and which I have read with pleasure, to whom then could I better apply for such information ? I am Sir,

Yours, &c.

Fen Court. W. Turnbull.

P. S. Your early answer will much oblige me.

Here then is positive proof of certain facts, viz. that certain friends of this Mr. Turnbull, without knowledge or information on the subject, *had some intention of establishing* such an institution; and, that he employed himself in begging what information he could get to enable them to draw up a plan with truth or plausibility enough to set the scheme a going: and it is no unfair inference to suppose, that by such conduct, *they meant to serve him, and he meant to serve* HIMSELF.

In due time a society was established, and to a publication called " *a few General Rules, &c.*" was prefixed a dedication, of which the following is a part.

† A few general Rules, &c. 2d edit. p. 19.

Society

" able uneasiness, by a too great pressure on the lower
" part of the hips. This, I conceive, I have remedied,
" by

" *Society for the Relief of the Ruptured Poor.*

To the Right Hon. Henry Dundas, one of his Majesties principal Secretaries of State, President.

Sir Francis Blake, Bart.
Sir Walter Farquhar, Bart. M.D.
Maxwell Garthshore, M.D. and F.R.S. and
John Heaviside, Esq. surgeon extraordinary to his Majesty,
Vice Presidents.

Gentlemen,

I dedicate this manual to you, as the liberal and active guardians of a charity, which, from its general importance, now ranks in the first class of useful establishments, and, *under your* influence, in proceeding to a happy maturity. If, in the course of my official situation, as surgeon to the institution, I have contributed to its advancement, my labours will be amply rewarded: I shall receive the blessings of the afflicted, *and secure the flattering distinction of your esteem and approbation.*"

And, in the Appendix to the same publication, he says, " to alleviate the miseries of the poor, who, from their laborious avocations, are more subject to rupture complaints, and less able to seek relief, than the affluent; several gentlemen, not less distinguished for their rank and opulence than for their benevolence, *stood nobly forward in* 1796 *and founded this charity.* The Right Hon. Henry Dundas became president, and when party contentions and political differences are exploded and forgotten, his name will live in the bosom of posterity, as the disinterested and liberal benefactor of suffering humanity. The offices of vice presidents were accepted by four gentlemen, whose names are recited in the first sheet of this manual, and, who also came forward with a chearfulness that unequivocally demonstrated the beneficence of their nature. *My appointment of surgeon to the institution, I consider as one of the most flattering distinctions of my life. In the discharge of my duty, I claim no other merit than what may arise from a persevering and* DISINTERESTED *attention.*"

The whole of this is most artfully constructed to impress the reader's mind with an idea that this institution was founded by or with the concurrence of those gentlemen whose names were so ostentatiously pushed forward; that this Mr. Turnbull was selected and elected by them to be its surgeon; and that he, good man, had no merit or expectation but the PURE designs that he should derive from the persevering and DISINTERESTED discharge of his duty. This is not, really, true; the project was his own, every gentleman that, it was thought, would contribute a guinea, or become otherwise useful, was hunted till he did so: a society was thus formed, and those gentlemen whose names have been so ostentatiously published, did suffer their names to be placed in those situations, because they knew that such an institution, if properly conducted, would be highly beneficial, and were desirous that every advantage which it could derive from their names, and their support, should be given to it, funds were raised, for the relief of the objects whose diseases might

" by making the pad *droop more*, and rendering the neck
" longer and more curved; the circular steel spring, by
" these

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might induce them to apply for assistance, as the subscribers believed, though the fact may be more correctly stated, by saying, the funds were devoted to the purposes of the institution.

The Vice Presidents, &c. were frequently told, the affairs of the institution were proceeding in the most prosperous way, but as their names were conspicuously held out to the public as sanctioning this undertaking, they thought it incumbent on them to ascertain the facts; they did institute an inquiry, and, in consequence, did discover such facts as induced them to withdraw from all connexion with the undertaking, and the *respectable* Society for relieving the ruptured Poor, is now, to use a lawyer's phrase, *non est inventus*.

It is true, that something like a resurrection of this institution has been attempted, but it is worthy of remark, that the name of Mr. Turnbull is the only one thought to be of importance enough to deserve *public mention*; for example, in the Monthly Magazine, for October, 1802, is the following paragraph, which was undoubtedly inserted by authority. " Since the commencement of that truly useful institution, " The Society for the Relief of the Ruptured Poor, 1800 patients and " upwards, have been *admitted under the care of Mr. Turnbull*, and " received essential benefit, in a great number of instances a radical " cure has been effected." Here we see the modest Mr. Turnbull, who, when it suited his purpose, on a former occasion, *affected to have* BEEN CHOSEN by the gentlemen whom he publickly thanked for having elected him, and affected too, to have no ambition but to discharge the duties of his station under their auspices, is here held up to view as the *only person who does* ANY THING IN THIS BUSINESS. The fact is, that having, by means best known to himself, got rid of those gentlemen who would have added credit to the undertaking, because it is well known they would not connect themselves with any thing that they thought disreputable, he is willing to do that by himself, *if possible*, which he would have been more willing to do under the sanction of their names if he could have kept it, because he might have done it more effectually.

I have entered at length into this subject, because it is necessary to convince those who are willing to give their money for benevolent purposes, that, when they do so they should likewise take the trouble to see it is expended for the purposes they intended it for. Without alluding in the least to Mr. Turnbull, I shall add two anecdotes to prove, that money has been given for most laudable charities, and converted by unprincipled projectors to their own use. The first happened in this country within the recollection of many hundreds still living, the second, if it ever happened at all, happened in a very distant land.

Some years ago, an ingenious projector discovered that a certain class of persons in this country were peculiarly exposed to a state of misery that too commonly terminated in an untimely end, and most philanthropically devised a plan to rescue them from that state, and make them useful members of society; the advantages of that plan were so obvious, that many benevolent persons subscribed the money

necessary

" these means, rests higher upon the loins, and conse-
" quently must produce a less pressure on the hip joints,
" an

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necessary to carry it into execution, and the projector, though known to be without property, and not in a way to acquire any, undertook to conduct the whole, and formally refused even to accept of a salary for his trouble.

The leading subscribers, after some time, thought it necessary to examine the state of the concern, and found, besides what was known to have been expended for the uses of the charity, there was a deficiency of twelve hundred pounds, of which no account could be obtained, and therefore they discharged the manager. This person, having thus lost his profitable situation, complained of ill usage, set up a counter plan, to be conducted under *his* auspices, got a number of associates who were called *his* collectors, divided the town into districts, and sent *his* collectors from door to door, to demand money for the use of *his institution* with more effrontery than would be exerted by an impudent dun in demanding the payment of money that was due to him. Much money was obtained by this means, but at last the projector vanished out of sight, no one knew what became of the money he received, and the original institution, having fallen into respectable hands, still exists, a thriving proof of the benevolence of the inhabitants of this country.

As the second anecdote is said to have happened in past times, it cannot be supposed that I should vouch for the correctness of it; and therefore shall merely relate it as it is conveyed to me, with the authority on which it stands; I leave every one to give it what credit they may think it deserves.

Having some connexion with a gentleman who is descended from the historian of Lilliput, I learn from him, that many papers relative to that wonderful people remain unpublished, and which, if ever they are published will prove, that although they were but six inches high they possessed all the virtues and some of the vices incident to men of larger growth, and as a proof of this position the following anecdote has been selected:

The people were much afflicted with a disease which was always dangerous, and not unfrequently fatal: the rich were generally able to secure themselves from its ravages, but the poor, for want of ability to obtain proper assistance very frequently became its victims. One of the medical tribe who had little employment, reputation, or property, took advantage of this circumstance to make *a good thing for himself*. He persuaded the rich to raise a fund, by means of which the poor might, without any expense to themselves be supplied with the assistance they wanted. The plan was so visibly calculated to do good, that it was immediately encouraged, and would have proved one of the most beneficial establishments in the country, if the management of the whole, as well as the money raised to support it, had not been entrusted to the original projector, and a junto of his friends, who were resolved to turn it every way to *his* advantage. He got an assistant whose fortune he promised to make by this establishment; but, as they were equally needy, and some time was necessary to bring the establishment to the point they wished, they agreed to support themselves in the interim by a mode

 which

" an inconvenience which has been much complained of " by those who have been under a necessity of wearing " these bandages."

Here then, we have Mr. Turnbull particularly describing, and taking credit to himself for bringing into practice that particular method of constructing trusses, which W. H. T. Esq. says, was the *usual method, for no one reason in the world, but from an old custom*, and W. H. T. Esq. in return demonstrates, in the most satisfactory manner, that Mr. Turnbull's boasted improvement is the most absurd, most dangerous, and most ineffectual method that can be adopted, and what is not a little paradoxical, they both are in the right, and each of them is wrong.

It is singular that Mr. Turnbull should demonstrate any fact, particularly one that will so little increase his reputation as a director of mechanics, for it is not supposed that

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which our historian does not seem to have understood, as he employs several pages in explaining the terms drawing and accepting bills, cross acceptances, &c. but the whole seems to amount to what has since, in England, been called, bills of accommodation; many of these were manufactured, and becoming due before the money was forth coming, the doctor threw them all upon his deputy, and left him to settle them as he could.

This one, being unable to pay, thought to get indemnified by complaining of his associate, and exposing him to the society, which he attempted to do in a full assembly, but the doctor had many friends there who got a majority to determine, that the society would not interfere in the *private* transactions of its officers; they expelled the deputy for improper behaviour in prefering his complaint, and voted that a large sum of money should be given to the doctor out of the funds of the charity, as a grateful return for the manifold services he had rendered it. This disgusted the honourable part of the members, who immediately renounced the society, and as no persons of respectability would afterwards be connected with those who remained, it sunk, after some struggles, into oblivion; and thus, by the conduct of a few unprincipled men, was an establishment, which at its outset promised to be as useful as any in Lilliput, totally destroyed, and the suffering poor deprived of that assistance which the benevolence of their richer neighbours would willingly have afforded them.

To return from this long digression to Mr. Turnbull; when the secrets of his conscience shall be laid open, it will be known *why* those gentlemen whom he beplaistered with so much praise withdrew themselves from the society for relieving the ruptured poor, which they *had* been so willing to support, and which they had the power to serve; and why, since those gentlemen did leave it, no name of more consequence than that of Mr. Turnbull has been found to put at the head of the concern.

Till he does explain all this, the transaction, in all its parts, may form *one of the most flattering distinctions of his life*, and yet not be that kind of distinction which every man will envy him.

that he will pretend to be a mechanic himself; and it is unfortunate that he should introduce his *pretended improvement and real invention*, by contrasting it with an account of the uneasiness produced by those trusses which go directly round the body, for it is certain that no uneasiness is produced by trusses made in this way, when they are properly adapted to the patients they are intended for: W. H. T. Esq. is right in his critique on Mr. Turnbull's invention, but has made two trifling mistakes, first, in saying it was the usual mode, from an old custom, and secondly, for saying that that deviation from Mr. T's invention, which he recommends, is his own discovery when ten thousand proofs may be produced to prove it has been the universal practice for almost half a century.

The next part of W. H. T. Esqr's. *invention* that claims our attention is, what relates to the understrap, and matters connected with it; what he says on this part of the subject is comprised in the following words, "the thigh-"strap to be made of *wash-leather*, *lined* with thin tape, "the end adjoining the buckle to be of neat's leather. "The thigh-strap to be *sown* with strong thread well "waxed, to the hoop part of the truss; by *this fixture* "of the thigh-strap, the pressure will act on the bottom "part of the pad of the truss.

"The bottom part of the pad of the truss is the part "that stops the aperture: a double-tongued buckle I have "invented, instead of the lower brass knob. This buckle "*draws* and fixes the bottom of the truss close to the abdomen."

Thus far he goes in his first edition, which IS DATED AND PUBLISHED IN 1800. In the second edition, *dated and published in* 1802, he has added the following note:

"I communicated my information to a truss-maker, *a* "*man of education and understanding*, LATELY DECEASED: but, though I suffered twenty-four years under his "care, his pride, prevented him listening to me: his "trusses, from my alterations and additions, are now become perfectly useful. *I never could get him really to* "EXECUTE *the meaning of the word* FIX: *my idea of it* "*was, to sow* FIRMLY *so as not to move.*"

I know not WHO W. H. T. Esq. is, nor do I know * what

* He says, 1st edit. p. 31. "During a seclusion from the world, "from bad health, ruptures and trusses were my *hobby horses*, and I

 "have

what may be his motives for writing as he has done; but, before we part, I shall prove that he has collected many particulars, which, if they were not general, were at least long known in the best practice, and assumes the merit that may be due to them as *inventions of his own*; and is not very unwilling to make dastardly insinuations, to the prejudice of those from whom he might have received them if he actually did not; an *honourable* peculiarity of conduct, of which the present is a very convincing proof.

My father died in January 1800, at which time W. H. T.'s work was either published, or on the eve of publication, *and it does not contain the note I have quoted from the second edition, which was published in* 1802. Why was NOT that note inserted in the first edition? because he *dared not make an allusion* which is scandalously false, to a man who was able to justify himself. Why WAS it inserted in the second? because dead men cannot defend themselves; my father was then recently deceased, and no other person is since dead to whom such an allusion could apply; and this *benevolent liberal-minded man*, claiming to himself SOLE AND UNIVERSAL knowledge on the subject he was writing upon, thought it would be an addition

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" have made great improvement in the umbilical truss." No man can be a more strenuous advocate for the freedom of hobby horses than myself; but, I mean *general freedom*, not upon the French principle of *freedom to one*, and annoyance *to all the rest of mankind:* but when a *little poney* that might be drowned in the water that lodges in a cart rut, will not keep the road, nor let a broad wheeled waggon, or a stage coach, or a foot passenger pass without kicking, and plunging, and striking at the pannels, and dashing the mud about in every direction, to the extent of its *little* abilities, I think it an act of charity in any passenger to give him a few smart lashes, to make him keep in his own track, and leave the rest of the road free for those who chuse to travel the same way. W. H. T. Esq. seems to have acted in a way that is common with those who engage in hobby-horsical pursuits. They begin with what they think they understand, go on to what *they know they are ignorant of*, and then, if the tits have any spirit they set off full speed, the riders lose the stirrups and reins, hold fast by the mane, and dash away without stopping till they get thrown into a slough, from which they find it difficult to extricate themselves. Thus it has *literally* been with him; he began with his own case, acknowledged he had no professional knowledge of the subject, yet gave advice to those who want professional assistance, and has ended in assuming the dictatorship of all the surgeons, truss makers, and patients in the world—and how he will extricate himself from his perilous situation time only will shew.

dition to his fame to say he had offered to *give* the fruits of his knowledge to a man of eminence, who proudly rejected the mighty boon; but there is something in hypocrisy and falsehood that always leads to its own detection; this truth has long been known, and is again confirmed by W. H. T. Esq. in the present instance.

If he suffered twenty-four years under the pride and obstinacy of the person he alludes to, when did he acquire the knowledge that would enable him to put an end to his sufferings? as all the knowledge he has on this subject has been obtained by experiments on his own person, and as during this twenty-four years he so frequently offered his information to this obstinate * man, at what time † did he make those experiments on himself, which led to these important discoveries? Again, if he had made these discoveries which were slighted by the *obstinate man*, why did he continue suffering when it was in his own power to put an

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* As this allusion of W. H. T. has obliged me to mention my father, I trust I shall be excused for adding a few words on that subject: his manners were rough, but he had a sturdiness of principle that always prevented him from doing what he thought was wrong in the exercise of his professional duty. The principle was good, that modification of it was wrong which sometimes made him refuse to conform to the wishes of his patients in matters of indifference; but he was right when he refused to accommodate himself to the folly or absurdity of those who would sometimes apply to him: in *this particular* he resembled the late Mr. Pott, of whom I shall relate an anecdote for the edification of W. H. T. Esq. and such *malades imaginaires*, if there are any more such in existence.

A gentleman who had a rupture consulted Mr. Pott, who gave him all the necessary advice and information, and supposed the interview was then at an end; but the patient, who had read some surgical books, and imagined many things in his own case, which never had existence, was determined to enter into a full discussion of them with Mr. P. who no sooner perceived his drift than he exclaimed, "*Pshaw, Sir! your rupture is in your head,*" and turned from him abruptly. The reproof was not of the most elegant kind, but it was most certainly just.

† This gentleman's manner of writing is so desultory, that it is not always easy to follow him. Since writing the above, I find he says, if his (1st edit. p. 22.) first improvement, the fixture of the thigh strap to the hoop part of the truss *invented by the author twenty years ago.* Taking *all* his assertions for gospel, it appears then that he must have suffered continually by *the pride and obstinacy* of his truss-maker, for *twenty years after he had invented* something that would certainly put an end to all his sufferings. A most singular proof of fortitude under pain, voluntarily submitted to, and as most people would think, for no useful purpose.

an end to his own sufferings? When W. H. T. Esq. shall have given answers to these questions that shall be consistent with each other, and with the note which gave rise to them, he will add more to his own reputation than by all the *new inventions* he has yet made public. He *may say* his allusion does not point to the person I direct it to, and if he can *prove* this he certainly is at liberty to do so; but as I believe it will be impossible for him to do this, I shall proceed to prove, that his insinuation is false in every particular; which I think I can do to the satisfaction of every impartial person.

It is thirty years since my father began to teach me his business, as *he then* practised it; one of his first lessons was, *always to sew the understrap fast to the truss on the particular part it ought to lie upon, and so as not to let it slide or slip backwards or forwards in any manner: because the stability of the truss depends on the understrap having hold of it by two fixed points, one on the pad, and the other on the proper part of the hip.* This is the rule which he invariably adhered to during his life; which I invariably followed, in consequence of instruction *before* I had reflected on the subject, and *afterwards* from a conviction of its propriety, when I had examined it in every way that it could be examined. I know this is not the *general* practice, but I do not think it confined to myself, and claim no merit on the occasion but that of proving, that W. H. T.'s pretension to it, as a discovery of his own, is totally void of foundation.

With respect to the rest of what he says on this subject it is only necessary to observe, that understraps are *most commonly* made of linen, but many make them of leather as he advises, and though they are usually fastened at the knobs of the truss, buckles are frequently used; the variations on these subjects are almost and have long been infinite, and W. H. T.'s pretensions to the invention of what he mentions is quite uniform with the rest of his discoveries.

That invention of W. H. T.'s which he thinks of most importance, and which has evidently made a more permanent impression upon his head than could be expected from so *soft* a material, is his calico cushion, which, according to him, is not only good in itself, but actually transforms *bad trusses into good ones*; a qualification, which if it is not exaggerated, will certainly render it an acquisition of much consequence to many poor truss makers, as well

well as many unfortunate suffering patients: the * utility of any thing of this kind will be discussed in another part, our present intention is to ascertain the truth of W. H. T.'s claim to the invention, and the merit of introducing it into practice. Of this calico cushion, he says, 1st edit. p. 14, a description of a cushion of coarse calico, *invented by the author, from a very slender idea communicated to him.*

In the preface to his 2d edit. p. 6, he says, "Long "after my methods were executed, I was much pleased, "accidentally to find that I had adopted the *old* system "of firmness, and the mode of wearing a truss, of an "eminent French surgeon, *who practised about the year* "1726: and whose work, translated from the French, "was published by MILLAR, in the Strand, 1748, entitled "a Dissertation on Hernias or Ruptures, in two parts, "by George Arnaud, master of arts, &c. (enumerating all "his titles). I was charmed with the discovery, as I can "speak in stronger terms of the system of another; and, "*being the system of a professional man*, I hoped it "would attract the notice of professional men." Thus, it seems, this gentleman claims to himself the merit of an invention the idea of which he acknowledges *was communicated to* him; and which, after his methods were executed, he found was the *old* system of firmness, promulgated by Arnaud, who practised in Paris in 1726, and whose work was translated and published in London in 1748.

It is remarkable, that all those who engage in the practice of quackery, whether their object is to get money, to get reputation, or only to get a little hobby-horsical amusement, act precisely in the same manner, that is, they lay claim to merit which they know they do not deserve, and garble what evidence they find, to produce such as may be in their favour, and keep back what they know must make against them. This has been the conduct of

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* The particular description of this cushion is to be found in his book, it consists of a number of folds of calico made into a cushion of some thickness, and laid under the pad of the truss. As he has not mentioned the exact number of magical folds required, or said that calico has any *specific* virtue above all other stuffs, I presume that an equal quantity of any other soft material disposed in the same manner, will produce just the same effect.

of W. H. T. Esq. on this occasion, for, with Arnaud's book before him to transcribe the title as he has done, he must have known that Arnaud practised in London in the year 1748, and that the translation was published here for and by himself; why has he not mentioned this? For a very evident reason; to induce his readers to form an opinion, that would not be improbable if the facts were as he has stated them, *viz.* that he at the present day might form a system from his own reflection, which had been practised by a French surgeon in the beginning of the last century, without HIS being acquainted with the circumstance: but, had he stated the fact which he *did* know, *viz.* that Arnaud was practising in London in 1748, had he told that which he might have known, *viz.* that he continued to practice in London for the rest of his life, and he died at a very advanced age, something more than twenty years ago, a very different inference would be drawn, and which, as he seems desirous to keep out of sight, shall now be brought forward for his benefit.

Whatever was useful in Arnaud's book, would in all probability be used in his practice, and as he practiced in London till the end of his life, (say 25 or even 30 years ago) whatever was useful in his practice, would be gradually disseminated and adopted by various persons who were interested in getting the best information on this subject, and from some of these W. H. T. might have got the idea upon which his pretended invention is founded: but though this is conceded for argument sake, it is too much to be granted in point of fact: the idea of interposing some soft material between the body and any thing that pressed upon it so as to give pain, is so very natural that it would occur to most people immediately; certainly it did not originate with W. H. T. or Arnaud; I have known, perhaps, hundreds of patients who have done the same thing from their own feelings; I have known many others who have done the same thing by the advice of their surgeons, &c. I, for reasons that will be hereafter explained, have made it a part of my regular practice ever since I was able to form any opinion upon such points as I thought it incumbent on me to recommend to my patients: of course I shall not deny the *utility* of such things as he recommends on this occasion, though it is certain that *his pretending* TO HAVE INVENTED *this* is nearly as absurd as if he should pretend to have invented the art of eating his dinner.

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As there is nothing new in any thing that is useful in his publication, and as much pains have been taken to puff it into notice by every kind of manœuvre, it may be curious to ascertain what motive could be the occasion of so much pains being taken: it is printed in such form, that "the profits arising from the sale of this work will be "appropriated to charitable purposes." This may have been intended by the author as a consequence of, but could not be a motive for the publication; because, whoever proposes to effect any purpose by an act, generally proportions the means to the end according to the best of his judgment, but any one who is acquainted with the subject, and followed the advertisements through newspapers, magazines, the covers of reviews, &c. must be convinced that *more* money has been expended in that way than the sale of the work can have produced, *therefore no profits have been, or are likely to be appropriated to charitable uses*: the *real* motive, however, seems to peep out like the cloven foot at the end of the publication. At p. 51, 2d edit. appears the following *postscript*:

The author *accidentally* omitted to mention that a specimen of his trusses may be seen by any medical gentleman, at Mr. J. Callows, Bookseller, Crown Court, Soho; *who will also take the trouble of referring persons that desire it, to a truss-maker of ability, who is acquainted with the author's inventions and directions.*

There lies the fact. The first edition was nominally published at a bookseller's, but was in *reality* sold principally at the shop of an obscure truss maker in an obscure part of the town, who exhibited about two dozen copies of it in his window, and in answer to inquiries said, he piqued himself on executing the plans suggested by the author of those *new inventions*. It is possible that the author may have benevolently fancied, that what he calls his *new inventions* may be useful to the parties interested; that he has no interest of his own to serve by it; that having found some working man, or perhaps, some man who is not even a workman, though able to please *him*, he rewarded him by giving him the publication of this treatise for the joint benefit of himself and the public: hence the peculiar manner in which it was *first* published: it has, perhaps been suggested by some discerning friend, that this mode is not very consistent with the *pretensions* to disinterestedness which it contains, and therefore, on publishing a second edition, it is left *entirely* to the booksellers,

only referring to the *truss-maker of ability*, as a circumstance almost too trifling to be remembered, though in fact, he had a principal share in the concern: in all this there is no more harm than what arises from the duplicity of assigning *one* motive for an action, which, in reality is the effect of another.

In taking leave of this subject it will be right *to attempt* at least, to reduce all the glaring inconsistencies it contains into some regular order; it will be candid and liberal to suppose that a man speaks the truth of himself, when there is no proof that what he says is false; it is, therefore, to be presumed from the evidence of his own works, that W. H. T. Esq. is a gentleman of *easy fortune*, who has no view to increase *that*, or *his professional reputation*, by publishing his *new inventions:* but, having at a former period got *two ruptures*, one in his groin, *the other in his head* *, and not finding them equally manageable, has wandered from surgeon to surgeon, and truss-maker to truss-maker, till he has circulated himself through the whole profession and all the trade: having thus collected an idea from one, and a hint from another, till he has made up a system which answers his purpose; and, as he has really forgot from whom he received any of the parts, calls the whole his own.

Having thus passed his life in quacking himself, he is now willing to pass his dotage in dispensing the fruits of his experience for the benefit of others, and as this is his *hobby* horse, from which he expects no advantage, he has given his treatise to some person to publish, who *has* a secret motive to answer, which *he* thinks will best be served by

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* Outré as this statement may appear it is literally true. That rupture which got into close contact with his *left* testicle was, of course, on his *left* side. In p. 27, 1st edit. he says, "a rupture will cure "itself; that is, the peritoneum will resume its position, and health, "even in adults, without any apparent cause, as *happened to myself, on "the right side, twenty-four years ago.*" Now, unless a rupture on the *right* side, *and* a rupture on the *left side constitute but one rupture*, it is certain that this unfortunate gentleman had two ruptures; but, whether *that* which was so easily cured, or *that which has been so constant in its attachment to him is the rupture in his head*, I shall not take upon me to determine. The above is certainly a *true* statement of his case, unless we should suppose W. H. T. Esq. has written a falsehood which is not to be believed, as he says, with all the *confidence* of innocence in his appendix, p. 8, "could I, who am well known in the "world, *dare* to make these assertions, if untrue?"

by *pretending* to publish this gentleman's book under the stale * device of giving the profits for charitable purposes, though his *own* benefit is all that he has in view, and by the steps taken to secure *that*, it is rendered morally certain, that no profit will ever accrue to any charity whatever.

The only circumstance in this work, that merits more serious consideration, is the commendatory letter of Mr. Blair: when a gentleman of his rank in his profession gives his name to a man who places it conspicuously in advertisements that are spread in every direction with no more respectability than the puffs of a common quack medicine, it is natural to believe he has some strong motive for so doing: the person to whom Mr Blair's name is given, undoubtedly means to obtain that credit by the use of it, which he would not derive from his own, if it were known; it will, therefore, be necessary to examine Mr. Blair's letter, to see if he means to support all the assertions of W. H. T. Esq. or, whether his meaning has been distorted, so as to give it the *appearance* of doing so, although in fact it was not his intention. That it may not be supposed any unfair quotation has been made for this purpose, his letter is printed entire at the foot of the page, † and those parts that are commented upon are printed in italics.

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* Not knowing these persons, or being in their confidence, it cannot be expected that I should be able to explain their motives here. I shall, however, state a case hypothetically which *may* happen at some future period, though it has not yet taken place.

Suppose then, that when Mr. Turnbull shall establish a *new charitable institution*, he may not find any man of established reputation, who will be connected with him; he *must* have a truss-maker, and he *may find it easier to make one such as he wants* than to get one ready made; he *may* promise such a one mountains of gold, and in the end only tease him with bits of paper and disappointments, and having thus disgusted, may turn him off to seek his fortune.

If all this should happen, and W. H. T. Esq. should want an operator, and meet with this man, *he* may think the golden mountain is now found, and set himself seriously to work, and knowing all the benefits Mr. Turnbull has derived from *his* charity, he *may* think, that to publish with the view of giving the profits to charitable purposes *may* be the best plan to bring it into general notice.

† Dear Sir,

I think myself honoured by the wish you have expressed, that I would permit you to use my name as a recommenda-

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No man, who is acquainted with the reputation of Mr. Blair, either professional or private, will doubt the *purity* of his motives for stepping forward on this occasion; though it is to be regretted that he did not exclude all ambiguity from his opinion, particularly as that ambiguity is most conspicuous where the clearest decision was wanted: he says, "The principal benefit I have derived "from your *instructions* and friendly intercourse, has been "in the mode of applying the truss, not obliquely, as *is* "*usual*, but after the manner described by Monsieur Ar-"naud, so that the hoop or spring is exactly in a circular "direction."

What does Mr. Blair mean by the word *usual* in this place? Does he mean to say that *in his practice it has been usual* to apply trusses in an oblique, and not in an horizontal direction? and that W. H. T. Esq. first induced him to adopt the right method? Of this Mr. Blair's word is sufficient proof, for he *must* know the fact, and, indeed, acknowledges it, by confessing that W. H. T. Esq. instructed him in that mode of applying the truss; or does Mr. B. mean, by the word *usual*, to say, that *all* persons, of every description *usually* applied trusses in this oblique way, till this apostle, W. H. T. Esq. came to convert them to *his truth? That* is the construction which this gentleman

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tion of your pamphlet; *but I am not quite reconciled to the idea of appearing very prominent, lest the purity of my motives should be questioned.*

I have several times employed the trusses as recommended by you, which admirably well answered my wishes; and I have even found your calico pads *alone*, when applied to an old worn-out truss, produced the most decided advantages, in keeping up a rupture of long standing.

The principal benefit I have derived from your instructions and friendly intercourse, has been in the mode of applying the truss, *not obliquely, as is usual, but after the manner described by Monsieur Arnaud*; so that the line formed by the hoop or spring is exactly in a circular direction.

The trouble you have taken in order to the REVIVAL *of this method does you great credit*; and the publication of it must prove useful to unprejudiced persons, who will fairly make the experiment.

I know your intention to be honourable and disinterested, in thus stepping forward to serve your afflicted fellow-creatures. *If you cannot persuade yourself to put your own name to the next edition of your pamphlet, I do not decline to afford it my feeble sanction, by permitting the insertion of this letter*, but I hope you will see the propriety of informing the public, to whose benevolent exertions they are indebted for so useful a treatise. I am, &c. &c. WM. BLAIR.

To W. H. T. Esq.

man wishes to have put on Mr. Blair's words, though in any fair construction they will scarcely bear that meaning: W. H. T. Esq. asserts, indeed, that he has done this, and there is little reason to doubt that he wishes Mr. Blair's letter should be understood as confirming that assertion: but if Mr. Blair does mean to confirm this assertion, he must not only state what has been done in his practice, but that he has enquired through all the profession, and discovered that no other person knew how to apply a truss properly; now as he certainly has not made that enquiry, and as that practice, which seems to have been new to *him*, though in general (not universal) practice for half a century, W. H. T. Esq. can derive no advantage from Mr. B.'s testimony as to the *novelty* of what *he* is *pleased to call his invention.*

This claim of W. H. T. Esq. is, in fact, destroyed by Mr. B. immediately afterwards, where he says, "The "trouble you have taken in order to the *revival* of this "method does you great credit." Mr. B. will admit that his compliment on the *revival* of this method necessarily amounts to a declaration that he did not INVENT it, which W. H. T. Esq. says he did. Here the evidence of Mr. Blair is at variance with the *assertion* of W. H. T. Esq. and *both* of them are at variance with the truth; for I trust it has been proved, to the satisfaction of those who are impartially disposed, that this practice has neither been *invented nor revived*, but has been in common, though not universal use, for at least half a century.

On the important affair of the calico cushion too, Mr. Blair is profuse in his compliments: after what has been said on that subject, it will only be necessary to add, that, within my own knowledge, many patients, without information, and from the plain suggestions of common sense, in attempting to obviate the unpleasant effects of pressure, have applied similar substances in the same manner: and I have, for reasons that will be explained hereafter, constantly recommended the same practice; but, if it should be contended, that the plain sense of any man might not lead him to adopt the same practice, it may evidently be deduced from Arnaud's publication; this is, indeed, acknowledged by W. H. T. Esq. with circumstances that prove to whom he was indebted for it: in this statement of facts, it will plainly appear, there is no inclination to deny *the utility* of the thing, though it certainly

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is intended to prevent those from claiming the *merit of the* INVENTION to which they certainly can have no claim.

I am really sorry to see Mr. Blair mention Arnaud with terms of unqualified approbation, because he was, in every respect, a disgrace to the profession of surgery: because W. H. T. Esq. admires him, and avows "his intention to make many quotations from him," because the consequence of this project, if duly executed, must be, to introduce into notice, and perhaps into practice, the system of this quack, who was driven, by the contempt of mankind, to pass his life in the obscurest walks of society, as a just reward for his impudent attempt to cheat the public under the pretence of curing ruptures: since it is become fashionable to quote Arnaud, I, too, will quote him at the foot of the page, to shew *what* he was capable of, and how justly they act who endeavour to render him an object of praise, admiration and imitation.

If an attempt was made to bring all his absurdities into view, nearly the whole of his book must be transcribed, but it will be sufficient to produce two passages, * one

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* In hernias of the inferior part of the abdomen, the situation ought to be such, that, the patient being laid upon his back, his buttocks and thighs may be considerably elevated, as well to determine the parts more easily into the cavity of the abdomen, as to keep the muscles in a kind of general relaxation. If the hernia is in the scrotum it ought to be supported below, and raised by something of a soft nature, such as a pillow. This situation ought to be tne same during the strangulation; but this posture is of so great importance in the first moments of this symptom, *that a great many persons have preserved their lives by lying down even in the fields and applying to their hernias, the pomatum I generally give my patients. This pomatum is a remedy, which though peculiar to myself, I shall not be so mercenary to keep a secret. The effects of it are so speedy, that the most considerable strangulations are either reduced spontaneously, or may be very easily reduced, when it has been applied an hour to the hernia*, unless it is accompanied with adhesions to the parts. The efficacy of this remedy, which on account of its speedy effects, surpasses all others the best adapted to this symptom, cannot be better evinced, than by the relief it affords, the very moment it is applied to the most painful hemorrhoids.

It is prepared in the following manner.

Dissolve an ounce of the gold of African ducats, or of the purest gold in aqua regia; precipitate the dissolution, and let it subside, and then pour off the menstruum by inclination, wash the precipitated substance several times in fountain water, in order to dissolve the salts of nitre, which will be entangled in the divided parts of the gold. Put the precipitated

one an infallible receipt to cure ruptures; * the other a case to illustrate the success of his practice.

With

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precipitated substance into a glass mortar, and triturate it for two or three hours. Then pour upon it by little and little, four pints of highly rectified spirit of wine, and stir the powder with a glass pestle, in order to make its parts rise; pour off the liquor by inclination, into a china vessel, taking great care not to mix with it, what of the powder remains at the bottom of the mortar. Put some of the spirit into the mortar again, and continue to move and pour the mixture into the china bason. Repeat this operation till the whole of the powder is entirely carried off. Set fire to the spirit of wine, and allow it to consume till there only remains a small degree of moisture in the powder. Then quench the same, in order to avoid the fulmination of the gold. The remaining humidity is to be dried by the sun.

Take this powder and put it again into the glass mortar. Add to it two ounces of the seeds of oriental pearl reduced to an impalpable powder on a marble. Pour upon it four ounces of white and very clear vinegar: stir these powders together with the vinegar, for three hours at least, let the whole subside for twenty four hours; filter the vinegar, and put the powders into a glazed earthen vessel. Pour upon that a pint of the oil of pistachie's, and two ounces of orange flower water, then add four ounces of virgin wax. Boil the whole, to make a pomatum according to the art. When it is cold wash it by little and little, for twelve or fifteen hours, with water of butter-milk distilled in *balneo mariæ* in which is macerated a sufficient quantity of the leaves of burdock and nightshade. After it is washed, mix exactly with the pomatum an ounce of sedative salt and half an ounce of saffron reduced to powder.

N B. It is of importance to boil it to a proper consistence, and to wash it carefully, in order to preserve it from corruption. *Arnaud on Ruptures*, p. 137.

* In 1732, I was called to Ibouville, a town about forty miles from Paris, to see Mr. Doudeuill, a man of sixty years of age, who had a complete hernia twenty-six inches in circumference. It descended to the middle part of the thigh. The tumour was very soft, and seemed as if it would re-enter easily. The patient told me, that it was near six years since it had arrived at the same bulk; that it was almost twenty in assuming that largeness; that for four or five years past he was afflicted with colics and faintings, which often obliged him to sit down for relief, and support the tumour with his hand; but that for eight or nine days past he felt a great deal of more pain than usual. For five days he had vomited his fœces, and went but very little to stool, though the wind was freely discharged through the anus. The tumour was soft and very sensible. From these signs I concluded, that adhesions were the cause of these symptoms, and therefore thought the only method to be taken, was to perform the operation. Nothing could be added to the general remedies, which had been used with all possible care. I took the advice of Mr. Coste, surgeon of Miru, who agreed with me, on the pressing necessity for the operation. I apprised the patient's friends and himself of the danger there was in undertaking an operation of this kind; but said, at the same time, that there was no other method of preserving his life. The courage of the patient, who was a man of a robust constitution, was animated

With respect to the first, it is to be observed, that in the old practice of physic and surgery many remedies were used

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animated by the hope of a cure, though uncertain, so that he prevailed on his friends to consent that I should perform the operation, which I did in this manner. I laid bare the whole tumour, by dissecting all the intestines, which made only one body with the herniary sac, which was of a considerable thickness. I used all the necessary precautions not to open the intestine, in which attempt I succeeded. However, it was gangrened in a great many places, which were of different bulks and figures. Some of them were round, others long, others triangular, and others of irregular figures. Some of them were half an inch broad and long, whilst others were two, and others three inches. But there were distances between them, consisting of five or six inches of the sound parts. I at last laid all the parts bare, after an hour and a quarter's hard labour. Then being fatigued to such a degree, as almost to have lost the use of my limbs, I was obliged to rest myself, and in the mean time covered the tumour with a fine linen cloth soaked in tepid water. I deliberated with Mr. Coste on the method to be taken, in order to finish the operation. The confusion of the parts, by means of the thick and fleshy adherences which kept them together, and the mortification which had seized most of them, made me propose cutting off all that was without the abdomen. *I told the patient this ungrateful piece of news, which, instead of terrifying him,* AUGMENTED HIS COURAGE. The large portion of the mesentery, which sustained the ileum, which was less altered than the colon, was the principal object of my attention. I could not remove this intestine, without dreading an hemorrhage from the mesenteric vessels. In proportion as I made the ligatures, I cut the intestines where the tied vessels terminated. I then tied the vessels of the *coecum* with a single thread, and cut that intestine. I made three or four ligatures on the *mesocolon*, and cut the intestine which it sustained, and which was very gangrenous in all its length, which consisted of about eight or ten inches. All this parcel of the intestine thus cut successively, according to its length, being totally removed, there no longer remained any thing in the scrotum, except the testicle, which was sound, and included in its membranes, and the mesentery with the ends of the colon and the ileum, each of which came about two inches without the ring. There was no portion of the epiploon in the tumor. My design at first was to stitch the two ends of the intestine together, but the determination they had taken to come out of the abdomen, was such an obstacle, that I could not have succeeded in this attempt. They came out in such a manner, that the colon passed above the ileum, and was situated towards the penis, whilst the ileum lay towards the thigh. Besides this circumstance, they were intimately adherent not only to each other, but also to the ring itself. In order to have joined their extremities, it would have been necessary to detach these adherences, which was not possible; it was therefore necessary to leave them in this situation. As the ring greatly compressed the two ends of the intestine, and as the fœces had not a sufficient free discharge, I made a dilatation in the ileum and ring, by introducing my buttoned bistory into the remaining part of the ileum, which I boldly divided. But I acted

otherwise

used that were expensive, troublesome, and absurd in the extreme; but *they* were the productions of well-meaning though

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otherwise with respect to the ring, which I was obliged to disengage on the side of its inferior pillar. I only made a small dilatation in it, on account of the epigastric artery, which, in such cases, is very near this pillar. The fœces were forthwith discharged in a very large quantity, and the excrements were involuntarily voided, for ten or twelve hours without intermission. Notwithstanding the many ligatures I had made, a great number of small vessels, which had escaped, discharged a good deal of blood during the operation. I permitted this discharge so long as it did not incommode me, both to facilitate the evacuation of the vessels, and because I HAD NOBODY TO ASSIST ME, EXCEPT A WOMAN, *who secured the parts* WHILST THE PATIENT HIMSELF HELD THE CANDLE; for Mr. Coste was obliged to leave me, on account of some pressing business. I dressed the wound with dry lint, with which I covered the mass of the mesentery. I left the extremities of the intestines free, only covering them with a simple pledget dipt in the yolk of an egg. I compressed the mesentery as regularly as I could, by means of compresses and a bandage. The hemorrhage ceased, but it was only for twelve or fifteen hours; for I was obliged to dress the patient twice in the night, and to use the strongest styptics, in order to brace up the extremities of the small vessels, which either could not be comprehended in the ligatures, or which had escaped from them, and whose orifices were become much larger, and permitted so great a quantity of blood to be extravasated, that the patient must have died, if I had not continued with him; for Mr. Coste was obliged to go to his own home, which was about three miles distant. Next day there survened a hiccup so violent, that I thought the patient could not surmount it; for he was several times like to die for want of intervals sufficient for inspiration. The great quantity of blood he had lost by the hemorrhage, and by the two copious venesections, did not permit me to seek for relief in the aperture of a vein; I was therefore obliged to use laudanum in substance, the dose of which I augmented by half grains every half hour; so that in two hours he took four grains and a half of it, which at last alleviated the hiccup. He remained about five or six hours as it were intoxicated and without sleep, but during that time he enjoyed an agreeable tranquillity, and the hiccup was so diminished, that nothing dangerous was to be dreaded from it. It continued, however, three or four days, but always became less and less. *By the examination we made of the quantity of the intestines I had taken away, we found that there were more than* SEVEN FEET OF THEM. The patient, by the care of Mr. Coste, was cured in six weeks. Three months after the cure I advised him to come to Paris, that I might try to reunite the extremities of the intestine. Messieurs Petit, Le Dran, Morand and Verdier, whom I called to consult on the means which might be employed to remedy this inconvenience, found that the reunion was so much the less impracticable, because the direction which the ends of the intestine had taken, could not have permitted it during the operation; besides, the portion of the ileum was so retracted, that it was hardly possible to receive it. It formed a kind of body like a hen's arse, whose margins re-entered in-

ternally.

though mistaken men; far different from this was Arnaud, for *no one will now believe* that *he ever attempted* to make that composition which he has described with so much pomp, much less that he ever attempted to use it, and least of all, that if he did make and use it, it had ever cured a single patient: the whole is the most impudent piece of quackery that ever was brought forward in face of the world, and renders it unnecessary to say more on the character of this man, who is mentioned in terms of the highest praise by W. H. T. Esq. and without a word of censure by Mr. Blair.

The second extract is a case that must reflect eternal disgrace on English surgeons and English patients; the first very unwisely bind their patients before they begin an operation, and the latter submit to be bound for fear they should not have fortitude to bear the pain they must undergo: while the *great Arnaud* disdained such precautions, and this poor old Frenchman, with no other support than an old woman and his own good spirits, held the

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ternally: The colon had totally disappeared. All the part of the mesentery, which had remained out of the abdomen after the operation, was so dissolved, that no mark of it was to be felt, either in the scrotum, or about the ring. It afterwards created no trouble in the dressings. This remark is of great importance, because it lays a foundation for some reflections on the cause of that perplexity, which a part of the mesentery remaining without the abdomen created to Mr. Le Dran, in the operation described in the sixtieth observation. Our patient was therefore obliged, during the remainder of his life, to use an artificial anus. But his industry rendered this inconvenience more supportable to him, than it would have been to any other person. He was very careful not to offend others by the bad smell, which they must necessarily feel, if he had not subjected himself to some little pieces of art and contrivance, which freed him from that disagreeableness which his misfortune must have otherwise produced. He had made several pessaries of cork covered with wax, in the form of a bottle cork, proportioned to the bulk and largeness of the intestine, and about an inch and an half long. This pessary was tied with a small cord to the principal compress. He introduced it into the intestine, and laid three or four other compresses on the former. He secured the whole by a bandage composed of a single circular, and a slip, which passed under the thigh, from behind forwards, in order to be fixed to the circular by a pin. He undid this apparatus every morning and evening, in order to empty it as occasion required. He was sometimes obliged to facilitate the discharge of the excrements, though always of a very liquid consistence, by means of a clyster. At other times the smallest portion of the fœces was not discharged into his apparatus. By this means he enjoyed six years of perfect health, and at last died of an indigestion. Arnaud on Ruptures, p. 341.

the candle himself while more than seven feet of his intestines were cut away from him, and there is no doubt, had the tune been in existence, would have sung *Ca Ira* all the time of the operation, with as much glee as if he had been dancing the *Carmagnol* before the Princess de Lamballe's head. The case requires no farther comment.

The fate of this Arnaud has been a little singular: he had met with the only recompense that his best friends would wish for him, that of being entirely forgotten: he was then first brought forward as a great man, by the great Mr. Turnbull:* then mentioned with admiration by W. H. T. Esq. and received a smile of approbation from Mr. Blair; still there was something wanting to complete his fame, but I may venture to hope, that my coming forward to make a quartetto on the occasion will leave nothing to desire on that head.

It is now time to have done with W. H. T. Esq. and his *new inventions;* he seems to have expected criticism, to

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* This elegant, accurate and correct writer says, in the dedication to his few Rules, &c. p. 8. "I have stated, in a former edition of this tract, "that a CELEBRATED WRITER, ARNAUD, who *published a* LEARNED *and* ACCURATE *dissertation on hernia*, had delivered it as his "opinion, that one in ten of the people, male and female, are ruptured. "The *character of this writer, having acquirrd a deserved celebrity "throughout Europe, entitles him* NOT ONLY TO OUR ESTEEM, *but "our* CONFIDENCE, &c. &c." Again p. 10.—"It becomes me, on "this occasion, to observe, *that by opposing so* GREAT AN AUTHORITY, "*I subject myself to the censure of professional men, and I confess, "this idea has, for some time past*, MADE ME UNEASY; *but, with "the utmost deference to the abilities and character of Arnaud*, I cannot but imagine he is mistaken as to the number of people labouring "under this calamity."

Those who have read the two extracts I have made from Arnaud's book, and think it possible that Mr. Turnbull may be fond of FUN, will suspect that, in writing the above, he intended to HOAX his readers; whether this was the case, or whether *his own knowledge* of the subject REALLY induced him to think *the learned and accurate* Arnaud was entitled to so much *esteem and confidence* that ALL PROFESSIONAL MEN *would blame* HIM *for differing from Arnaud's* opinion, I shall not take upon me to determine, but it is likely he expected to gain some tribute to his own *great erudition* by quoting, in this awful manner, an author, who certainly was unknown to the greatest part of, if not all his readers. W. H. T. Esq. seems to have caught the Arnaud mania from Mr. Turnbull, which is not uncharacteristic, but it is really surprising, that Mr. Blair should add his name to those of two men so different from himself in praising Arnaud, whose works, it is presumed, will now be valued as they ought to be.

have courted opposition, and to have been disappointed at not meeting with it; for, in his first edition, he modestly enough offers his inventions, in his second, supposes a host of patentee truss-makers are rising in battle array against him, and, in the Appendix, he dashes down the gauntlet of defiance with a most Quixotte like fury, by saying, "*his mode alone is right* *." As he has ridden his little hobby horse over the common for two years unaccompanied and unmolested, he may not be displeased with the company of a fellow traveller in the same way. *My hobby horse* is telling stories, I have reserved a choice one for his use, and shall leave the application of it to himself. In the year 1745, when the rebel army was approaching to Derby the country people flocked into the town before them, and spread dreadful accounts of the devastation they committed; among other things, it was said, they ravished all the women: the ladies gave a general shriek and ran to their hiding places for safety: one good old soul who had lived in peace for many years, and never thought *such things would come to pass in her time*, barricadoed her cottage door, and waited in awful expectation, the horrors of the night: as all was silent she ventured to peep out at the door, but, as a group of highlanders was close by, she instantly shut it again. Again she peeped, and seeing them remain in the same place, ventured to gaze stedfastly at them, till she had caught the eye of one of the Scots, when she became fascinated, as a poor bird is said to be by the rattle snake, and stood with the door and her mouth wide open in expectation of the fate she had no power to avoid: finding he did not stir, she made faces by way of provocation; but, as he was still unmoved, she began to lose her temper, and, thinking a little *gentle raillery* might bring them sooner

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* As his doctrine on this subject comes in a syllogistic form, it would be unjust not to state it in his own way.

In mechanical action there is *only* a *right* and a *wrong*; W. H. T. Esq. is in the *right*,

Ergo, *all those who differ from him must be in the wrong.*

The argument is a good one, and may be stated various ways, for example:

In mechanical action there is *only* a *right* and a *wrong*;

Some one who differs from W. H. T. Esq. is in the *right*;

Ergo, *W. H. T. Esq. must be in the wrong.*

And, as the evidence of facts is three to one against him, *he is entitled to the full benefit of his own syllogism.*

sooner into action, she screamed as loud as she could, ye nasty bare a——d rascals when do you begin to ravish, or do you mean to keep poor people up all night for nothing at all?

Should W. H. T. Esq. meet with any thing in the preceding pages, to provoke his risible faculties, or excite his irratibility, of which he seems to have, at least an equal share, he will have the goodness to believe that nothing has been written to impede the progress of any *real* improvement he may have made; on the contrary, it has been seriously intended to shew the full value of every thing of that kind, and attribute to every person that portion of merit which he actually possesses, or, to use a phrase that is a little homely, indeed, to put the saddle upon the right horse.

I had written thus far, without any more knowledge of the author of these new inventions, &c. than could be gathered from his title page and pamphlet, and now that he has manifested himself in propria persona, have not the least desire to alter a tittle that has been written; but since he has overcome the "*obvious scruples of delicacy which* "*prevented him from giving more than the initials of his* "*name to the public*," and is now publicly blazoned with all his titles, I shall address a few words to him in his own character: for, though the man who goes in masquerade is bound to take in good part whatever is addressed to the character he assumes, if the flap of a Harlequin's sword, or the whack of an oaken cudgel, should apply too close to be agreeable to his feelings, he is, on taking off the mask entitled to a serious explanation: that explanation I shall now give to save him the trouble of asking it, and me the trouble of writing again on the subject.

Such hypocondriacs as Mr. Timbrel, may think it hard not to be allowed to understand their own cases, yet *that fact has been incontestibly proved by him*; for he has published such a statement of his case as it is impossible it should exist, and therefore, must be untrue: this might, at first, be the effect of ignorance, but, in his second edition the whole is so far altered as to put those circumstances, the impossibility of which has been shewn, compleatly out of sight; and, after having done this, in a subsequent publication, he boldly claims the character of *unimpeachable veracity*, by saying, "*dare I, who am well known in the* "*world, say these things if they were not true?*" Without any breach of good manners, I feel myself entitled to say, this is the most consummate piece of assurance I have ever met

met with: any man, who is not professionally acquainted with a subject he undertakes to write upon, may make mistakes; but, having made and discovered such mistakes, any man of common understanding, who meant honourably to give what he thought useful information, would correct his own mistakes as publicly as he had committed them, for he must be sensible, that in proportion to the benefit any person might derive from his communication, if it was true, may be the mischief that might be done by it if it was false; how far Mr. Timbrel's conduct coincides with this rule I shall leave for others to determine.

Having already examined Mr. Timbrel's work, I shall only notice one circumstance that has happened since: he has applied to the Society for Encouragement of Arts, &c. and obtained their gold medal for his communication; this is the greatest *honorary reward* that society can bestow.

It is not to be supposed that the few guineas which are the intrinsic value of that medal, could be the temptation to induce him to take so much trouble; but, when it is considered that for twelve long months the commendatory letter of Mr. Blair has been advertised in newspapers, magazines, &c. &c. as puffing Mr. Timbrel's *new inventions*, it is not unreasonable to suppose that, whatever may be his motives for thus keeping them in view, having worn out one voucher, he is willing to have another ready in succession: and, in this point of view, there is no doubt that "*the Society for the Encouragement of Arts, &c. having* "*bestowed their gold medal on Mr. Timbrel for his valuable* "NEW INVENTIONS, &c." would make a most conspicuous figure: but, as it would place the society in a situation very little respectable, it may be proper to observe, that the society was induced to give that testimony of its approbation, by its belief in Mr. Timbrel's * *own* representation

* It is said that Mr. Timbrel produced to the society, or its committee, Mr. Blair's letter, his own printed pamphlet, a truss, and a wooden figure made to fit the truss; and proved the efficacy of his invention by exhibiting himself and an old washerwoman, who was said to have a rupture; these two amused themselves with jumping off chairs, &c. to shew how well their ruptures kept up. All this was no doubt managed with becoming gravity and decency, and as it is confessedly a hobby-horsical pursuit of Mr. Timbrel's, it will be granted that

sentation of his *own invention*, and the perusal of that letter of Mr. Blair's which has been printed: it follows of course, that the society did, at the time believe in the truth of those representations, but does not really afford any *additional confirmation* of the facts pretended to be invented by Mr. T. on the contrary, as every part of the subject has now been fully investigated, if it should appear that there is no *novelty* in any part of his *new inventions*, it will only amount to a proof that the society has been deceived as well as others, into a belief of what is not true.

It would be imprudent to hazard a conjecture as to Mr. Timbrel's real motives for acting as he had done in communicating his discoveries, inventions or whatever else he may call them to the public; if he had no other design than that of communicating to others, that which he had found useful in his own case; it is to be regretted, that in so doing, he should have practised artifices that have often been practised by contemptible empirics for the purposes of deception, and to be hoped that he will take in good part this humble attempt to teach him the prudence, as well as the propriety of not attempting to accomplish an useful end by very improper means.

Of Bowman's Patent Truss.

As what are called Bowman's patent trusses, have been obtruded, upon public notice, with much pertinacity for some years past, their merits, if they have any, are entitled to investigation in this place: it is said, that the author, patentee, or proprietor of this article, is engaged in some department of the medical profession; a fact, of which I have no knowledge, but really know not how to believe; because he has not acted on this occasion as it is reasonable to suppose a man who had but common sense would do, either with reference to the respectability of his professional situation, or even his own personal advantage.

Mr. Pott first emerged into general notice by the attention he paid to ruptures; the Hunters too paid so much attention to them, and seemed to think the reputation that would attach to those who best understood this subject of so much consequence that they engaged in a dispute with Mr. Pott, which was conducted with much acrimony, respecting

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that he and his washerwoman made as respectable an appearance as Corporal Trim did, when Uncle Toby discovered him shewing Susannah how to batter in breach.

specting the discovery of some facts relative to ruptures, which each party claimed as his own: other celebrated men have arrived at eminence in the same way, and so much has public attention been directed to the disease for some years past, that any man who had acquired any decided superiority in the treatment of this disease must, by making it known in a manner suited to the respectability of his professional rank, have acquired wealth and reputation with as much ease and certainty as by exerting himself in any department of the profession. These facts Mr. Bowman must have known if he is in the profession, yet these advantages he has relinquished by withdrawing himself as much as possible from all visible connexion with a concern of so much importance, and advertising it to be sold in a cutler's shop *with a printed bill of directions for applying it*, as the elixir of life or any other nostrum is sold by the dealers in quack medicines in this town. As Mr. B. has done this, we are bound to follow his track, and make the best use we can of the posting bill and bill of directions, as we have no other clue to guide us in our inquiries.

The posting bill, which is still to be seen stuck up in the window of a cutler, who is, or was employed as a vender of this universal remedy for ruptures, is as follows:

"Ruptures.

"By the King's Patent.

"Trusses, *on an entire new principle*, for the preven-
"tion and cure of ruptures, in both sexes, *having no cir-*
"*cular steel spring, which is generally found so very uneasy*
"*to the wearer, and so liable to corrode and break.*

"The *same truss will fit almost any sized person*,
"thereby rendering a measure unnecessary.

"*The same truss will do equally well for a rupture*
"*of either side*, and admits of the pressure being varied,
"according to the necessity of the case.

"These peculiar advantages render them highly
"essential to those going to or residing in foreign coun-
"tries, where the difficulty experienced in procuring a
"truss to fit accurately is of serious consequence.

"*With each truss is given a plate, and full directions*
"*for applying it, but should further instructions be requir-*
"*ed*, A MEDICAL GENTLEMAN IS APPOINTED FOR
"THAT PURPOSE."

As a full investigation of the use and advantage of the circular

circular spring, and a comparison between *that* and the means which *have* been tried to effect the same purpose, *before* the elastic truss was invented, which were justly exploded by the introduction of that important invention, and which Mr. B. and others have attempted to revive *under the pretence of its being a new invention*, will be attempted in another part of this work; it will be needless to notice his introductory observation here: but the two next assertions, that *the same truss will fit almost any sized person*, and the *same truss will do equally well for a rupture of either side*, are so much at variance with all received opinions, and so evidently enigmatical as to excite a great portion of our curiosity; this we can only gratify by reference to the bandage itself, or, for want of that to the plate and bill of directions which are generously given with each truss: the latter is printed verbatim at the foot of the page *, and authentically proves the following facts, *viz.*

That

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* *Patent Trusses without a circular Steel Spring.*

The difficulty experienced in procuring a truss to fit accurately (more especially felt abroad) together with the many inconveniences attending the steel spring, its liability to corrode, break, &c. &c. induces the patentee to offer to the public a truss, which he flatters himself will be more generally useful, and to obviate many of the disadvantages attending those at present in use.

These trusses are so constructed, that the same truss will fit different sized persons, will do for a rupture on either side, and admits of the pressure being varied, according to the necessity of the case.

Each truss is put up as for the left side; but should the rupture be on the right side, it is only necessary to slip the circular band and buckle from the brass studs, by which they are attached to the pad, and change sides.

Fig. 1st. Represents a truss, extended, and fitted up for a rupture of the left side.

A. The circular band, to be buckled firmly round the hips, with the buckle C. and the strap D.

B. The spring pad, to be placed immediately on the part where the rupture has protruded, taking care the rupture is first perfectly reduced.

E. The under strap, to come under the thigh, and in the groin of the rupture side, and fastened on the single brass stud in the pad.

F. The sliding cushion to rest in the groin.

g g g g. Slides for shortening the truss, according to the size of the wearer.

H. Brass eyes for receiving the hooks of the under strap.

That this new patent invention consists of the following parts, *viz.* 1st. A belt, or circular band, as it is elegantly called, made of leather * or other soft materials, long enough to go round the body of a large fat man; consequently, by the help of a pair of scissars, may be made to fit the size of any *other* man, however *little or thin* he may be: all this is evidently simple and true.

2dly. A spring pad, to be placed immediately on the part where the rupture has protruded.

3dly. The understrap to go under the thigh, &c. &c. and,

4thly. *A sliding cushion to rest in the groin* †.

All this only amounts to a simple truss, consisting of a spring pad to be fixed on the part by a belt round the waist; there is, perhaps, scarcely a common truss-maker in town who has not, occasionally made trusses of this kind, and Mr. Blakie, the *real inventor* of the elastic truss, published a small treatise in the year

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Fig. 2d and 3d. Represents the truss on for a rupture of the left side, and it is requested to observe accurately the situation of the circular band, with respect to the hips, otherwäys the truss will not be near so easy; and the under strap must be drawn sufficiently tight to keep up the rupture; the degree of pressure necessary will soon be discovered by the wearer.

They are particularly adapted for the East and West-Indies.

It is sometimes recommended at first wearing, to apply three or four folds of flannel, or other soft substance, between the under strap and skin.

Upper Titchfield-Street, Fitzroy-Square, No. 51.

* This is not said in words, but may fairly be taken for granted, because the posting bill declaims formally against the *circular spring*, and the sole object of this *pretended new invention* is to provide a substitute for the circular spring.

† This *sliding cushion* is a most impertinently intrusive fellow. Mr. Bowman has been sporting his new invented patent trusses upon the town for several years; the printed paper I transcribe from has been in my possession more than six years: yet W. H. T. Esq. *who dares not assert what is not true*, has within two years published a treatise to prove, that HE has invented his infallible calico cushion, which is, in fact, a *sliding cushion to rest in the groin*, and I have proved, that it may fairly be deduced from *Arnaud*, who published his *valuable book* more than half a century ago. Now, as all these worthies are equally entitled to credit, if they have any spirit, we shall be entertained with a battle royal to ascertain who really is the inventor of the important article in question.

1764,

1784, to explain the nature of his invention, and in this he mentions the belt-truss and spring-pad as one of those inventions that had been found ineffectual, and was *therefore* nearly exploded: with these facts in existence Mr. B. must be extremely ignorant of what it became him to know, or he must have some qualification much worse than ignorance, if he will venture to say, that this which he calls *his invention* is upon *an entire new principle*. Thus driven from his *new principle*, he may seek for refuge in asserting, that he has adopted some particular modification of that kind of bandage, which renders it more effectual than those which were previously used: weak as this subterfuge must be, it is still, if true, capable of being proved; yet it will be difficult to prove this, for, if I am not misinformed, he has, himself, tried springs of different constructions, certainly *not* because he found that particular one he may pretend to have invented answer his purpose.

Every circumstance respecting this undertaking seems to prove it is the work of a man who artfully adopts every precaution that may preserve *him* from the shame that must attend the exposition of his pretended invention, at the same time that every artifice is adopted to make the credulous become dupes to his project: perhaps, the most impudent of these is the insinuation very generally circulated, though no one knows who is the author of it, that the *inventor of this truss* is a respectable surgeon: to say nothing of the improbability, that any surgeon of but common information, should be so ignorant as not to know that this pretended *new* invention is, in fact, an old one, that has been exploded for its inutility, or that a surgeon, who valued his own reputation, would sedulously, and with great perseverance, obtrude upon the public, as new and effectual, an invention which *he* well knew was obsolete and exploded, because experience had proved it to be ineffectual. There is a circumstance in the posting bill itself, which puts it beyond all doubt, that the author cannot be a medical man.

Having previously asserted, that the same truss will fit almost any sized person, and do equally well for a rupture on either side, he adds, "with each truss is given a plate, and full directions for applying it, but, *should further instructions be required, a medical gentleman is appointed for that purpose*;" by WHO is this *medical gentleman appointed?* Undoubtedly by the inventor, patentee, or proprietor of this extraordinary truss, who, *therefore*,

 cannot

cannot be *himself a medical man*, for, if he was, and acting fairly, honestly, and uprightly, in the scheme he is engaged in, however contemptible his invention, or mistaken his opinions might be, he could not hesitate to say positively, *should any further instructions be necessary, I will attend to give the necessary instructions* to the purchaser, that he may be enabled to do justice to my valuable invention as well as to himself; that he has not said this, is a strong corroborating proof, that he is not a *medical man*, and the other circumstances which have already been explained will enable the reader to form a just opinion of the whole project as it has been long obtruded upon public notice.

On what are called Patent Trusses without Straps.

The most extraordinary deception that has been practised upon the credulity of those who are afflicted with ruptures in the present times, is what is called *New invented Trusses without Straps, by the King's Patent.* Extraordinary, whether we consider its absolute want of novelty, or any kind of merit, or the artifices by which some gentlemen in the profession of surgery have been misled to give it their sanction, and by this means are, unintentionally, become associates in obtruding, perhaps, the most impudent deception that ever was practised upon the public: this being the case, it becomes meritorious to unravel the whole pretended invention, and shew those, who it is intended to deceive, what it actually is.

It is necessary to premise, that about thirty years ago, a Mr. Squire procured a patent for a method of making trusses, which were to be used without straps: he was patronized by Mr. Hunter and other eminent men of that day; and his trusses were very generally used, but with very unequal success. Had Mr. Squire been educated or properly instructed for the employment he embarked in, he must have known that no one mode of making trusses could be properly adopted, *to all the varieties of the complaint;* and had he had the least scientific knowledge, he must easily have learnt how to obviate the real inconveniencies that many laboured under from the use of his trusses; but this was not the case: he *had invented one mode* of making trusses, he very honestly made all his trusses by one pattern, varying only in size, and applied them indiscriminately to every

every one who required his assistance; the consequence was, that one was benefited, another, perhaps, injured by them; staunch friends praised, and bitter enemies reviled them beyond measure; and, in the midst of this contrariety of opinions, his patent expired, his invention became free for every one to use, and *has* been very much used ever since, with success proportioned to the various capacities of those who attempt to adopt it.

His invention consisted in making the circular string go all round the body, instead of little more than half round; as was the general practice before: by this improvement of his, it is found that a truss will keep firmer in its place, and therefore, where it can with propriety be used, a rupture will be kept up with more certainty than by a truss of the common form: its inconvenience was, that he did not know how to accommodate the curve of the spring, so that when applied to the body, its action should be exerted on the part where pressure should be applied, with as little pressure as possible on any other part of the body; the consequence of this defect was, that very few of his trusses were worn without producing intolerable pains by galling the hips, but more especially the back, on which account many were obliged to discontinue the use of these trusses who might have been served by them. But a more serious inconvenience was produced, not by a necessary defect in the construction of the truss, but by the false doctrine broached by those professional men, who chiefly recommended it: by these it was said, that the more pressure was made by the truss, the more probability there was of effecting a radical cure: this, as an abstract principle, might be true, but could not be generally reduced to practice, without doing much mischief; those who advised this practice, forgot that the spermatic vessels lay immediately under the parts pressed upon by the truss, and that hard pressure on those parts would produce inflammation in the spermatic vessels, consequently in the testicles, and very serious consequences might ensue: yet, as those who once advance a doctrine publicly are not very ready to change it, the patients continued to be squeezed hard in spite of inflamed testicles, &c. until their feelings got the better of bad advice, and they adopted a system that was less mischievous. Yet, notwithstanding all its defects, Mr. Squire's improvement was a very valuable addition to the general stock of knowledge we had before on the subject; and, in good hands, will always be found useful.

About

About two years ago, a man introduced himself to several gentlemen in the profession of surgery, on pretence of soliciting their patronage for a method, he said he had invented, of making trusses, and for which he intended to obtain a patent. One gentleman, from whom I have this information, questioned him minutely respecting his supposed invention, but could obtain no other information than that the peculiar advantage of this, his supposed invention was, that the springs were very strong, and being made to go all round the body, and fasten without any straps: the surgeon gave his opinion of this invention as far as the description was intelligible, and added, that the particular point, on which he seemed to lay the most stress, was not *new; it was well known to have been executed by* Mr. Squire many years before, and its success had not proved equal to the sanguine expectations that had been formed of it. To this the projector answered, as all people do, who have formed schemes which they do not wish to have contradicted, that, although Mr. Squire's invention had not succeeded, he knew *his would;* and, as he found this gentleman was not likely to become either a tool or a dupe to his project, he retired much disappointed, and never returned again.

As this person left no mark by which he could be traced, it cannot certainly be known who he was, but, from such an invention being soon afterwards advertised, and forced into notice with much confidence, it is presumed, he might be the *soi-disant* inventor of *New invented Trusses without Straps, said to be made by the King's Patent.* However that may be, our business at present is with *that* INVENTION, as it is most absurdly called, to investigate its merits most accurately, in order to enable those who may be interested to know the truth, to determine whether it is a *real invention* of any utility, or only an *artful deception,* fabricated for the purposes of imposition and fraud.

In pursuance of this plan, application has been made at the patent office, where it appears, that the only patent which can be supposed to be connected with such an invention, is one with the following title, *viz.*

For a Method of bending Steel, without the assistance of heat; *which may be applied to the manufacturing of surgical Instruments,* and to a variety of other useful purposes.

A correct copy of the specification of this patent has been obtained from the proper office, and is printed verbatim, as follows, *viz.*

To all who m these presents shall come, I, Joseph Egg, of

of Great Windmill-street, in the parish of St. James's, in the city of Westminster, gun-maker, send greeting. Whereas, his most excellent Majesty, King George the Third, did, by his letters patent, under the great seal of Great Britain, bearing date at Westminster, the twenty-first day of August, in the fortieth year of his reign, give and grant unto me, the said Joseph Egg, his especial licence, that I the said Egg, during the term of years therein mentioned, should, and lawfully might use, exercise and vend within England, Wales, and the town of Berwick-upon-Tweed, MY DISCOVERY *of an entire new method of bending steel without the assistance of heat*, which may be applied to the manufacturing of surgical instruments, and to a variety of other useful purposes, where BENT STEEL AND STEEL SPRINGS ARE NECESSARY. In which said letters patent there is contained a proviso, obliging me, the said Joseph Egg, by an instrument under my hand and seal, to cause a particular description of the nature of my said discovery, and in what manner the same is to be performed, to be enrolled in his Majesty's High Court of Chancery, within one calendar month of the date of the said recited letters patent, as in and by the same (relation being thereunto had) may more fully and at large appear.

Now know ye, that in compliance with the said proviso, I, the said Joseph Egg do hereby declare, *that my said discovery of an* ENTIRE NEW METHOD OF BENDING STEEL WITHOUT THE ASSISTANCE OF HEAT, *which may be applied to the manufacturing of surgical instruments, and to a variety of other useful purposes, where bent steel and steel springs are necessary*, is described in manner following, that is to say:

Take a piece of straight steel, *tempered similar to a spring* sword blade, and place one end against the body, and take the other end in the hand, bending it at the same time over a circular piece of steel or iron (such as is commonly known by the name of a *big* iron) moving it backwards and forwards as may be necessary to vary the blow, which should be struck in a parallel direction with the centre of the circular steel or iron (over which the spring wheel is bent) by an instrument similar to a hammer, but instead of a round face, or blunt edge, it must be like a chissel, so as to make a cut or impression at every blow, which by continuing to bend the steel spring and cutting it at every blow with the said instrument, *the spring may be made to a form proper for a rupture or a truss*, or any other similar shape

shape that may be required. In witness whereof, I, the said Joseph Egg, have hereunto set my hand and seal, this nineteenth day of September, in the year of our Lord, one thousand eight hundred.

(Signed) JOSEPH EGG.

Sealed and delivered (being first duly stamped) in the presence of

JOHN OSTLER, CHAS. E. JONES.

And be it remembered, that on the same nineteenth day of September, in the year above-mentioned, that aforesaid Joseph Egg came before our lord the King in his Chancery, and acknowledged the specification aforesaid, and all and every thing therein contained, in form above written. And also the specification aforesaid, was stamped according to the tenor of the statute, in that case made and provided. Inrolled the same nineteenth day of September, in the year above written.

Examined with the record in the Petty Bag-office, in the Court of Chancery, this 15th day of November, 1802.

(Signed) P. PARRY.

Much has been said of the abuses that have been committed on public credulity, under the sanction of patents, and it would be extremely difficult to produce a stronger proof of the extent to which those abuses may be carried, than the patent, of which the specification has just been recited; yet the laws which regulate patents are very clear, and the principles upon which they are founded are undoubtedly just: they are simply these: That a man, who by any exertion of talents and industry, produces any invention that will be useful to society, is entitled to a recompence proportioned to the utility of his invention, and ought to receive it from those who will be most benefited by it; therefore a patent is granted to secure him the exclusive privilege of selling his invention for the term of fourteen years, for his own benefit; after that period it is free for every one to make what use he pleases of it.

The proceedings to obtain a patent, are as follows:

The suppliant *makes affidavit* before a Master in Chancery, that the invention for which he requires the patent, is *bona fide*, entirely *his own invention;* that it is unknown; that he has never sold or made it public in any manner, and that he believes it will be a benefit to the public, when it shall be promulgated.

In

In consequence of making this affidavit he receives his patent, *upon condition* that he declares truly *what* his invention is, and so exactly, that no other person may inadvertently infringe his privilege; and that within a month he shall cause to be registered in the proper office, an exact and true specification of all the particulars of his invention, that it may remain a public record of the transaction. If he fails in any of these conditions his patent becomes void, and his invention, whatever it may be, becomes public, and every person is at liberty to make his own use of it: no punishment is provided for those who take out patents for old, obsolete, or well known inventions; that must be inflicted by general contempt on those who, by means little different from wilful perjury, endeavour to convert an useful privilege into an instrument of fraud.

It will be proper to ask, if the gunsmiths, who pretend to make "*new invented trusses without straps* BY THE KING'S PATENT," have any other patent besides that of which the specification has been transcribed? If they have, no reflection that can be made upon it can attach itself to them; if they have not, though no personal allusion will be made to them, they will be entitled to the benefit of any reflection the reader will make when he is aequainted with the merits of the patent in question.

If a man should really believe (however *mistaken* he might be as to the fact) that he had invented any article, and procured a patent for it, he would not hesitate to say he *had invented that particular article*, and would describe it most plainly; it would be his interest to do so, because by that means only, he would secure his exclusive privilege; if he knew he had *not* invented any particular article, and should choose to take out such a patent as would induce the public to believe he *had*, what would be his conduct? would he, or would he not, adopt such a system of prevarication as would prevent, as much as possible, those who should enquire into it to ascertain the real state of the fact? It is very remarkable that the person who was the original proprietor of the patent, of which the specification has been transcribed, would have the public believe that he has obtained the King's patent for a truss that may be worn without straps, and which *truss is of his own invention*, and yet should take out a patent in which the word truss is not mentioned; in the specifieation of which no kind of truss is described or distinguished from other trusses that are generally known; and in which it is merely said in so vague a manner,

 that

that the words might escape the notice of even an attentive observer, "*The* SPRING may be made *to a form proper* "*for a* RUPTURE *or a* TRUSS."

If those who are accustomed to trace the arts of prevarication will examine the structure of that sentence by which the scheme is announced to the public, or the patent and specification, they will perceive there is nothing that amounts to an assertion that the patentee invented any kind of truss; there is only that kind of circumlocution, (which those who admit the rectitude of jesuitical principles will approve) that may induce the incautious to believe he actually has; and, if those who have a very strong interest to avoid deception will not take the trouble to do so, the Jesuits, at least, will say they deserve to be deceived.

The INVENTION for which this patent *has been obtained*, and which the patentee has sworn to be a *new discovery*, and *bonâ fide*, *his own invention*, is, as declared in the specification, "*My discovery of an entire new method of bending steel with-* "*out the assistance of heat.*" The only question to be tried then, in order to ascertain the validity of this patent is, whether the allegation sworn to in order to obtain it is true; whether there is *any invention at all*, or whether *that invention be bonâ fide the invention of the patentee.* If it is, it might afterwards be debated whether, by virtue of a specification so loosely worded, he might create a monopoly of surgeons' instruments, or cutlery wares, or any other articles, by virtue of it: but, if it is not, though he has *sworn to the reality and truth of his inventions*, though he has paid the fees of office, and got a parchment with certain stamps and seals upon it, that parchment is no patent that can authorise him to claim an exclusive privilege to manufacture any one article of any kind.

Those who are acquainted with the manufacture of steel in any branch know, that articles of steel are first forged or otherwise wrought to a proper shape, then heated to a certain degree, and quenched in cold water or other fluid: in this state they are *quite hard*, and, in order to bring them to a proper temper, they are again exposed to so much heat as will lower them to the point desired; they are then in a state fit for finishing.

In the act of hardening in cold water, the steel frequently takes a shape different from what the workman desires: a knife-blade or a razor becomes crooked; or a spring takes a different curve from that which it ought to have: if the workmen were to soften these things again to make

make them straight, theywould, in allprobability, lose their labour, as on the next hardening they would, perhaps, cast out of shape again ; besides, the quality of the metal would be injured by repeated hardening. To avoid these inconveniences, *all workmen who make articles of any kind in tempered steel*, have, *from time immemorial*, had A METHOD OF BENDING STEEL WITHOUT THE ASSISTANCE OF HEAT, *by means of which they alter the improper shape* OF THEIR WORK, and give it that shape which they wish it to have. This operation is performed in the following manner :

The workman has a hammer formed like a blunt chissel, he lays the work (already tempered) upon the anvil, stake, biek iron, or any other eonvenient place, and strikes the steel many times with the sharp edge in a proper direetion, so that by eutting it in that direction full of small notches, the defective form of the work is altered, and it is reduced to that which it ought to have ; in other words, the steel is bent without heat into the form it is proper to give it. This operation is, by the workmen, ealled *hacking* ; the eutlers call the tool they use to perform it a *hack hammer* ; and perhaps there is no journeyman in that trade, whether he makes amputating-knives, ease-knives, razors, springs, or any other articles, who does not daily perform this operation of *bending steel without heat.* Let the most accurate investigator eompare it with Egg's specification, and determine what is the differenee between *his specified new invention* and their *old practice.*

But, it may be said, if this invention be *not* new, the applieation of it to the making of trusses may *be new*, and, if trusses made in this manner possess any advantages over those made in other ways, they are entitled to a preferenee, which, in that ease, they will obtain, though the *soi-disant* inventor eannot by patent seeure the advantages that may arise to himself : that is indeed the only important and real question which we shall now proceed to investigate.

The good qualities of a tempered steel spring, for whatever use it may be intended, depend upon the following particulars, viz. that the metal of whieh it is made shall be of a proper quality, uniform in its texture, free from flaws or inequalities of any kind; and so much depends on this, that a few strokes unequally applied in forging, will make the steel eloser in its texture, and *therefore harder* in some parts than others. To prevent this,

the workman, after he has forged his spring, places it for a long time in a low heat, by which the whole spring is reduced, as nearly as possible, to one uniform texture. Yet, with all the care that can be taken, springs that are forged are never so uniform in their texture, and, therefore, can never be so good as those which are never touched by a hammer, which is the case with those that are made of steel that is reduced to a proper size by a flatting machine. Supposing the metal to be uniform in its texture *before* it is tempered, it is obvious that the application of a regular heat in tempering, will give an uniform degree of elasticity to the whole spring; and, on the contrary, if an uniform degree of heat be applied to a spring whose parts are previously of an unequal texture, it is certain that such a spring must be unequal in its temper, *therefore* it will be incapable of sustaining any regular action: when subjected to such action, some of its parts *must either bend or break*; because, when the substance, texture and temper of a spring are equal in all its parts, the power of the whole is equally divided between them; but when any part is more brittle, harder, or softer than the rest, it is therefore weaker, and, when subjected to the same action, must demonstrate its own weakness and either bend or break.

A workman, who understands his business, may always make his springs, and temper them *properly*; but there is one circumstance of which he is by no means master. From some peculiar circumstances in the tempering of steel, a great portion of the articles tempered are distorted from their proper shapes: curved instruments become straight, and straight ones curved, and therefore are improper for the use they are intended for: if they were to be softened, rectified and tempered, the quality of the metal would be debased, and still they might bend again in the tempering, however frequently it might be repeated; therefore, the only alternative is to lay them aside as useless, *or* to endeavour to rectify them *after* they have been tempered, and for this purpose the operation of hacking has been used among all descriptions of workmen, in steel, for time immemorial. The effect is produced in this manner: if the instrument, whatever it may be, is straight, and should be bent in the hardening, the workman lays it on a proper tool, and with his hack-hammer strikes it very carefully upon the concave side, varying the stroke continually, and by this means cuts that side full of indentations or notches,

notches, by which means that side is lengthened till it becomes equal to the other, and of course the instrument straight: if the intention of hacking is to make the instrument more curved, he lays the hollow side upon a mandril, bick iron, &c. and strikes with his hammer on the curved side, and the instrument becomes more curved, till it is brought to its proper shape.

But it must be remarked, that, although the workman by this means makes his article saleable, instead of laying it aside as useless, it is always worse than if it had not undergone that operation, for the following reasons: every indentation made by the hack-hammer renders the part struck more compact, and consequently harder than the general temper of the instrument; *therefore*, instead of being uniform in its texture and temper, every instrument that has bsen subjected to this operation is full of inequalities in both respects; and as every mark of the hack-hammer is obliterated from knives and such articles in the finishing, it is probable that *so* many of them break when subjected to any exertion, in consequence of the unequal texture that is produced by the operation I have described; but as the very essence of a spring consists in the uniformity of texture and temper, which alone can enable it to bear the continual action and reaction to which it is to be subjected, no spring can be depended on upon which this *hacking or bending* has been performed.

From what has been said, it is evident, that a perfect spring should be uniform in its texture and equal in its temper; that, from difficulties in the manufacturing them, many have qualities the reverse of these; it is therefore evident, that if Egg's *method of making springs by bending steel without heat* (whether it is his own invention or not) is superior to that commonly used, it must be calculated to give them *more uniformity in their texture*, and *more regularity in their temper*, than can be obtained by the common methods; whether it *can do this* is the only point to be investigated, and will very easily decide the question.

He takes a piece of straight steel, *tempered* SIMILAR *to a spring sword blade*, bends it as near to the form it is intended to give it as he can, and strikes it full of notches with his chissel-like hammer, which operation hacks it in the form in which it is bent. As it has already been shewn that this operation has been used, time immemorial, by most workmen, and that it must debase the valuable properties of any spring it is applied to, there can be few arguments

guments required to prove that the ORIGINALITY and the MERIT of his invention are in strict unison with each other.

But there is a gross fallacy in that part where he says, take a piece of straight steel *tempered* SIMILAR *to a spring sword blade*, which *should* be explained, and which shall be particularly pointed out in this investigation. It is well known, that every man who uses a sword stakes his life upon the goodness of his weapon; and as the makers of swords are aware of this, they are as careful as possible in tempering them; so that there is no doubt, that, after every allowance is made for carelessness of workmen in extensive manufactories, sword blades are among the best tempered articles of steel that come into general use. This being the case, this man has displayed no small artifice in saying, take a piece of steel tempered SIMILAR *to a spring sword blade*, &c. But has he said, or will he dare to say in plain terms, that, *by the method described in his specification, he can turn, or* EVER HAS *turned, a sword blade, or a straight spring tempered like a sword blade, into the form of a truss?* I put this pointedly, because a foolish story has been propagated, that this method of making springs for trusses is so *peculiar*, that they can only be made of sword blades, and that the patentee actually imports German sword blades for the purpose of making them. I hope that *he* does not tell this tale, and that it is only the foolish mistake of some person who has misconstrued the ambiguous sentence in the specification, in which it is said: "Take "a straight piece of *steel tempered* SIMILAR *to a spring* "*sword blade*, &c." Till this is cleared up by positive proof from the patentee, I have no hesitation in saying, that, by accurate examination of some of these trusses that are still in my possession, I am convinced they are made of steel that never has been tempered like a sword blade, as they are still soft, and only owe the little elasticity they possess to being partially hammer-hardened by the strokes of the hammer on the outside of the curve.

The subject might with safety be left to its own merits *here*; but as an investigation has been undertaken, it will be right to mention some additional facts that will put the matter beyond the possibility of future dispute.

A gentleman who had a rupture, and was so irritable that he would not bear the pressure requisite to keep up his rupture, was induced to get one of these trusses: it did keep up his rupture, but it gave him more uneasiness than

than the truss he had previously objected to the use of. On seeing him some time afterwards, he told me his truss was *now* become *easy*, for he found, that though it seemed to be strong, he could bend it *in any way he pleased, and by this means he had altered* it, and made it quite easy. He wrote me the following note:

DEAR SIR,

I have repeatedly tried to wear the truss I had from you last, but the spring is so powerful at the pad, that the pressure is more than I can bear, except in a sitting position; in every other respect it fits perfectly, and the pad presses exactly in the proper place.

I am just returned from Ireland, and left the spring as much extended as I safely could, *but even five weeks has* MADE NO ALTERATION IN THIS RESPECT. I will thank you for a line to say when the bearer may call for one of exactly the same dimensions. I am your's, &c.

If I had not known that this gentleman was perfectly serious, I should have suspected both his communications to be *ironical*. To object as a fault that five weeks *continued extension* made no alteration in the form or power of one spring, and to mention as a subject for praise that the other might be bent with the hand into any shape he pleased, certainly had that appearance; but as he undoubtedly was serious, and as both his communications were correct, they prove every thing that is necessary on this subject.

I directed a person to purchase one of these trusses for the purpose of investigating all the facts of its construction. On taking off the covering, the spring appeared to be nicely burnished SIMILAR TO *a sword blade;* on the outside it was struck full of indentations, but on the inside it is perfectly smooth, and had not the mark of a single counter-stroke*: a part of it was almost blue, evidently

* In explanation of this it is necessary to mention, that when a piece of metal is laid upon the anvil or similar implement, and struck with a hammer, an impression is made upon the surface struck in proportion to the violence of the blow and the softness of the metal, and another impression is made on the underside of the metal that is pressed against the anvil by the stroke of the hammer; this I call the counter-stroke: it will not be so violent at to be indented like that which is struck by the hammer, but it certainly would be perfectly visible on the burnished metal. If, therefore, this spring had been burnished before it was bent, there would have been a counter-stroke visible directly

from the action of fire applied after it had been polished; I found several parts of the spring might easily be bent by the hand, but as I wished to keep this truss as a specimen, I did not entirely destroy its form; and, *with an old file, I found that* every part of it might be filed as easily as any soft steel. Now, though we know that a well tempered spring is not quite insensible to the file, it cannot be filed in the manner this one was; and as the very essence of a spring is to yield to pressure, and to resume its form on the removal of that pressure, it is evident that this never was properly tempered, and cannot with propriety be called a spring; whether it was finished in the manner I have described for the purposes of deception*, it is impossible now to determine.

A gentleman was indueed by strong recommendation to purchase one of these trusses: finding it was impossible for him to wear it, he gave it to me, and on taking it to pieces, I found the steel part of it exactly like the former in every respeet. I bent it with my hands into a shape totally different from that it originally had, and in this state they both remain in my possession for the inspection of those who wish to ascertain the facts I have related. It is to be remarked, that both these trusses have straps and fastenings to *fix them round the body in the usual way*; than which nothing can more strongly prove the seller's own opinion of the fallacy of the pretence that these trusses may be used WITHOUT STRAPS, to say nothing of the falsehood of pretending that they have invented the method of making trusses to be worn *without* straps, which really was the invention of the late Mr. Squire. From all that has been said, there is but one conclusion to be fairly drawn, but, for the aecommodation of those who are unwilling to form a decided opinion, I shall state two that *may be* drawn,

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rectly opposite to every indentation that appears on the outside; but, as there is not one, and as every stroke is ostentatiously left on the outside, it is evident that the spring was burnished *after* is was turned, and *after* the indentations were made on the outside: Whether this burnishing was so applied from a foolish affectation of finishing the work, or to give it the *appearance* of a sword blade for the purpose of deception, I shall not take upon me to determine.

* Lawyers, who understand definitions, are aware that there is an essential difference in the meanings of the words deception, imposition, and fraud; but as every plain man may not comprehend the distinction, it would be wasting time to engage in any disquisition on that subject.

drawn, and leave them to chuse that which they may prefer. The first is, that there is no one circumstance respecting this soi-disant invention that is new, superior to every common method of making trusses, or, in any respect worth notice; or, secondly, if it should be thought useful, and fit to be adopted in general practice, the specification is so constructed, that the patentee cannot support his monopoly, therefore every person is at liberty to make them who shall think proper to do so.

As these gun-makers have not made any claim or pretence to knowledge of ruptures, or those circumstances which are requisite to enable any one to apply trusses with propriety, and without danger of doing mischief, it must be improper to say any thing on that subject; it is possible they may not be so far masters of the subject as to refute the observations that have been made, and, in that case, they may endeavour to oppose them by the opinions of some professional men: when such opinions are brought forward, they shall be examined; in the meanwhile, some general observations on that subject may not be useless, as they may induce professional men to be cautious, how they suffer their names to be used on such occasions, and may likewise teach unwary patients to be cautious, lest they be imposed on by unwarrantable abuse of the names of respectable professional men; for it is certain that the greatest and the worst part of the quackery that is practised on this subject, is supported by abuse of the names of men who would start at the imputation of supporting the most contemptible quackery, though *they* are not conscious of the fact. The progress of such undertakings is nearly in the following way.

Some workman who has no actual knowledge of the subject he engages in, *imagines* he has invented a truss that is different from those he has seen; full of this fancied discovery, he frames a plausible account of it, introduces himself to such surgeons as he can gain admittance to, tells his tale, and, perhaps, is promised a recommendation: an opportunity offers, his truss is tried, and gives satisfaction: he modestly asks for a written certificate of the fact, which is thought too reasonable to be denied; indeed any gentleman may, without impropriety, do this, as he only certifies to a fact that he has seen; but let the consequence be observed. The adventurer, having obtained a few such certificates, acquires both confidence and impudence, obtrudes himself upon the world as having made a *great and important discovery*; provokes inquiry,

and it appears, that what he, *ignorant of the subject*, believed to be his discovery, was well known before: enraged at meeting with this check, he produces his certificates; and though the writers only meant each to certify that particular fact which he had seen, they are collectively obtruded on the public as vouching for all the pretensions to originality and superior excellence which he who has received them chuses to lay claim to.

Such has been the origin and progress of most of the pretended improvers of trusses during the last thirty years. The importance of the disease is acknowledged, the difficulty of treating it properly is likewise admitted; can it then be doubted that infinite mischief has been done by the tribe of blacksmiths, sadlers, and such like workmen, who, without knowledge, or the consciousness that knowledge is necessary, have erected themselves into *makers of new invented trusses?* Most gentlemen in the medical profession are aware of the mischiefs that are daily perpetrated by the arts of quackery in every department; it therefore can only be necessary to mention the fact, to induce THEM to be cautious how they suffer their names to be used, and to induce the unwary patient to be *more cautious* how they rely on such certificates as may have been obtained by artifice, and used for the purposes of deception.

But there are some men, though the number is very small, who are more forward to recommend these new adventurers from motives that are base, corrupt, and every way unjustifiable; they sell their recommendation to those who will pay the most for it. Whoever considers what the character of a surgeon ought to be, and what the character of a great majority of the gentleman in that profession actually is, will think nothing can be more base and contemptible than such a person as I have described: on the one hand hunting for patients, telling them of the danger of the disease, of the importance of a good truss, and offering *his services* to procure one; on the other*,

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* A person of this description brought a patient to my house, and, under the pretence of explaining the case, drew me into another room. The *explanation* he gave was, that he expected I should *give him half the price of the truss for his recommendation:* his proposal was rejected; he returned to his patient, and *modestly* told him, in my hearing, that I had not a truss that was fit for him; and they both went away.

In less than a month the patient returned by himself. I then learnt his honest surgeon had got him a truss from a workman of the lowest description,

traversing the town to find out that workman who will give *him* the most profit, and thus endangering the safety of his patient, for the *honest* purpose of getting a few shillings for himself. The number of persons who act in this manner is undoubtedly small; but as they will always be spurned by men of character, they naturally fall into connexion with those who have none, and are most likely to rally round that *one* of the *honourable* number who may be, in fact, least entitled to notice for his merit. With the cautions he should derive from the knowledge of these facts, the reader may safely be trusted to examine the *opinions* of those who volunteer themselves in supporting many of the *new invented* trusses of the present day.

Of Turnbull's few Rules, &c.

As the most prominent of these schemes that are obtruded, with a view to lead or mislead the unwary who are afflicted with ruptures, exists in a pamphlet, called "A "few General Rules and Instructions, very necessary to be "attended to by those of both Sexes who are afflicted with "Ruptures;" it is proper, in a work like the present, to enter into a critique of that tract, in order to ascertain the REAL as well as the ostensible motives of the author, and to ensure him all the praise which the merit of his performance may fairly entitle him to.

As it is a maxim in sound criticism *not to censure* a man because he has not done what he did not undertake to perform, I shall, in conformity with this maxim, not censure the author, because he has not treated his subject with that clearness and precision that would bring conviction to the minds of well-edueated professional men, as he has declared his "intention to avoid the technical lan- "guage of his profession;" but as he has said, page 7, "he intended these few sheets for the consideration and "observanee of the indigent and middling classes of so-

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description, whom *he* extolled as being a wonderful clever man; but he not having found him so, returned to me, and has been my patient ever since.

" ciety, and hopes they will not only be found useful to " the peasant or indigent mechanic, but to those more ele- " vated in life, who are not acquainted with the phraseo- " logy adopted in the science of surgery," I shall proceed to inquire what use or benefit they, for whose use they were intended, are likely to derive from these few rules, &c. &c.

In order to ascertain this it must be presupposed that the reader has a rupture, that he is so situate as not to be able to procure professional assistance, but has fortunately obtained possession of these rules, &c. which are to serve as a manual to direct him to take care of himself in various situations, and first to reduce the rupture even in case of strangulation.

He says, p. 29. " If the assistance of a surgeon can- " not be had on the first appearance of the disease, the " patient must give up all kind of exercise or labour. " Every exertion, however trifling, only tends to force the " intestines from their natural position, and increase the " malady. Immediate rest becomes essential, and the " position of the patient should be always with the head " lower than the body. To favour a return of the intes- " tines, it will be also necessary to place the feet of the " patient over the shoulders of another person, and to " permit his body to hang downwards. When in that " situation he should be JOLTED A GOOD DEAL! Which " in many cases, has been attended with the best con- " sequences."

Again, p. 30. " At this moment a gentle pressure of " the hands and fingers should be made. The person " operating in this way should grasp the swelling with one " hand at the bottom, while with the fingers of the other, " an attempt be made to push gently the contents of the " tumour into their place: always observing, that the " parts last swelled be first reduced."

Again, p. 31. " When the return of the gut cannot " be obtained by the means before-mentioned, the best " consequences may be expected by an immediate appli- " cation of cold water, or ice, if it can be procured. To " increase the coldness of the water, and thereby facilitate " the return of the intestines, two ounces and a half of " crude sal armoniac should be dissolved in a quart of " spring water, and frequently applied to the part. *When* " *this mixture, by standing, acquires the temperature of the* " *atmosphere,*

" *atmosphere*, *it loses its cooling* * *properties*, and, there-
" fore, a fresh solution should be made."

Again, p. 32. " An injection of cold water may " likewise be administered with great effect; but, for this " operation, a pewter syringe, † containing a pint or a " pint and a half (of cold water) must be provided, and " which may be had of most of the pewterers in London. " These syringes, admitting of greater force in the act " of administering the contents and lodging them in " the intestines, than those formed of elastic gum or a " bladder very often effect the reduction of the gut when " other means have failed."

" Dashing of cold water on the legs and thighs, in " cases of difficult reduction, has been also recom-
" mended."

" In addition to the cold applications recommended as " above, I would advise warm ones to be applied to the " belly at the same time, and in the following manner. " Take the bladder of an ox, two-thirds full of warm " water, cover it with flannel ‡, *to prevent any moisture* " *from touching the body of the patient.* Apply the blad-
" der, thus prepared, so as to cover the whole of the belly " *above the tumour*, and, at the same moment, let the cold " bathings before mentioned, be made *directly* to the rup-
" tured

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* Sapient *artes magister!* who hast, in the abundance of thy knowledge and philanthrophy, published a two shilling-pamphlet to inform the *indigent* and *ignorant* that when cold water becomes warm it loses its cooling properties, and those who wish to have it cold must cool it over again!

† If the text is literally understood, it must be the author's meaning, that the pewterers keep these syringes ready filled with cold water; but it will be charitable to suppose, that in the fervor of composition he did not clearly see his own meaning, and that this is an unintentional mistake.

‡ When reading this and the following passage separately their absurdity may not be apparent, but, on comparing them, it will be evident, for example, he first says, the bladder of warm water must be laid *upon* the abdomen, *but carefully wrapped up in flannel to prevent any moisture from touching the body of the patient*, then the cold water must be dashed directly upon the ruptured part! Now, as that is generally in some part of the abdomen which was previously covered with flannel to prevent any moisture *from touching the body*, the solution of these difficulties is not very easy; if the flannel is placed on the body to keep the hot water *from it*, how is the *cold water* to get *to it*. Has the cold water any salu-
tary

" tured part. These contrary applications of heat and " cold have been attended with the best consequences; " because, at the same time that it becomes necessary to " relax and enlarge the ring or opening through which " the intestines pass, and which is formed by the tendons " of the muscles of the belly, it is at the same time ne- " cessary to contract and diminish the size of the gut, " that the reduction may be effected with less difficulty."

For the surgical reader, enough has been quoted! but the danger is, lest the air of gravity with which all this is delivered, should prevent the indigent ignorant reader from seeing that Mr. Turnbull's object seems to be to banter, or, as the school-boys call it, make game of him: for it is impossible for even him to believe, that all this would be attempted by an ignorant patient and his friends; and a professional man would scarcely trifle with his patient in obedience to the dictates of this author; as it is improbable that this scheme will ever be practised according to the plan laid down by Mr. T. it may afford some entertainment to a person of lively imagination to suppose he sees a patient, with strangulated hernia, treated according to these rules: let the reader imagine, then, he sees a patient suspended by the heels, and JOLTED A GOOD DEAL, alias WELL SHAKEN,* by one clumsy operator; pressed on the inflamed and painful tumour by the hard hands of a second;

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tary effect upon the cuticle, and is the hot water deleterious? In his next edition this master of arts will probably explain these phenomena, and make the learned acquainted with those laws of physics on which they depend.

* I do not mean to call Mr. Turnbull plagiary, though the above idea is not original. When Dicky Gossip, of facetious memory, engaged in the practice of physic, he, like Mr. Turnbull, endeavoured to distinguish himself by doing something in the literary way. Upon the first draught he sent to his first patient he inscribed the following label:

When taken,
Well shaken.

The distich was certainly ambiguous; the nurse interpreted it in her own way, and having duly administered the draught, took the patient by the heels, and literally shook him to death.

It would be libelling the character of poor Dicky to compare his practice to Mr. Turnbull's; for though the patient was actually shaken to death in consequence of the orders he gave, there was a mistake; he did not order his patient to be shaken at all. But Mr. Turnbull adopts the nurses practice literally, by ordering the patient to be well shaken or jolted: and it is not difficult to foresee, that if the business was undertaken by an operator as well inclined as she was, the event would be the same in both cases.

second; injected *per anum* with cold water by a third, and alternately splashed with cold, and dashed with hot water on the abdomen by a fourth: if he considers that when ignorant people *do* act by the direction of a learned doctor, they are under the strong impressions of implicit faith, and, to all the preceding circumstances, adds, the screams of the unfortunate sufferer, he may form a tolerable idea of the inhabitants of Pandemonium, tormenting one who was newly arrived among them.

If to what has been said, I may add one *more* serious observation it shall be this; there is no folly greater, than, if so great, as the attempt to direct unpracticed men to perform even trifling surgical operations; there is no situation more dangerous than that of a patient labouring under strangulated hernia; few situations indeed where more fatal consequences will ensue from apparently trifling circumstances of misconduct. If, therefore, Mr. T. supposes these rules, as he calls them, should ever be practised by those for whose use he says they are intended——I shall not say a word more on the subject.

Though it is not to be doubted that he composed these rules, &c. for those whose benefit he says they were intended, it is equally certain, that he hopes to extend his own practice in this particular branch of business: acting upon these principles, it is not surprising he should cast a hawk's eye upon a class of patients who have kept clear from the hands of professional men, as well as the hands of all mankind. He says, p. 23, "females, who have been "*virtuously* educated, too frequently conceal this malady "until it becomes incurable: THIS IS A FALSE DELI-"CACY, *and should never be indulged.* Women very "often complain of cholic, which they treat with indif-"ference, but which, upon examination, has been found "to proceed from a rupture in the navel. *On the least ap-"pearance of a* SWELLING, those means recommended "under the head of TREATMENT, for reducing ruptures, "should be immediately adopted, and a compressive ban-"dage applied."

The first part of this passage reminds one of Uncle Toby's attempt to account for Mrs. Shandy's resolution to employ the female midwife in preference to Doctor Slop: "Perhaps, Brother," said Uncle Toby, "Mrs. Shandy "will not like a strange man to come so near her———." The remainder has a serious connexion with Mr. Turnbull's improved practice, which he either hopes, *interestedly*,

forestedly, will center in himself, or, with more liberality, will be divided among the gentlemen who practise surgery; in either case it deserves mature consideration.

How females, *virtuously*, or even *otherwise*, educated, may like Mr. Turnbull's new invented system of jolting, squirting, splashing and dashing, I know not; though it is possible even his learning and abilities may not have influence enough to induce them to submit to it cheerfully; but this is of little consequence; for, as he directs this to be done by any by-stander, ere a surgeon can be called, it is like to be over before he arrives; there is another point of practice, however, which he wishes to reserve exclusively for the surgeon.

He says, p. 23, "The patient should, on no account, "apply the truss himself (or herself) on the first appear- "ance of the rupture; but, in this particular instance, "submit entirely to the conduct of the surgeon. It is his "province to determine whether the whole of the in- "testines are returned, or a part remains in the opening "through which they descended."

Again, p. 20, "There are many people, however, "who cannot bear the slightest compression produced by "the truss on its first application. This inconvenience "may be remedied in the following manner:—let those, "who are thus circumstanced, apply a truss, containing "a slight steel spring band, for *half an hour*, the *first*, "*second*, and *third* day: at the expiration of this time, "the patient may wear it *for an hour* the three succeed- "ing days, and so increase *half an hour* every *third* day for "about *six weeks*. It may then be changed for one of a "stronger spring, and, at the end of three or four "months, the patient will be able to bear a truss produc- "ing, if necessary, the greatest compression."

As the superior irritability of the female constitution may frequently disincline, or perhaps render them unable to bear the pressure of a truss; as "they MUST on this "occasion submit entirely to the conduct of the surgeon," and as they MAY by his daily attendance for three or four months be enabled to bear the pressure of the truss, every man of feeling who possesses Mr. Turnbull's very natural regard for the sex, and whose situation will justify his hopes of partaking in this new branch of practice will sincerely pray that it may be universally adopted.

Such are the striking parts of these "*few general rules, &c.*" relative to the reduction of strangulated hernia; though the author directs, with equal solemnity, how

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to apply the tobacco glyster, purging medicines, &c. &c. On these I shall not employ the readers time or my own, though I may be permitted, in addition to what is already written, to observe, that if any absurdity exceeds all the follies of which a professional man can possibly be guilty, it is that of pretending to teach persons, without previous knowledge or means of observation to perform any thing like a surgical operation: and if this is the case in *general*, how much more so must it be if persons so instructed pretend to reduce a strangulated hernia, an operation in which the most experienced surgeons sometimes fail, and where a very trifling mistake from ignorance will certainly be fatal? This question I shall leave others to answer, and proceed to examine what may be termed the lighter parts of this valuable production.

Page 27, he says, "It is a fact, which should be generally promulgated and attended to, that much depends "on the means used at the commencement of the malady. "*The truss is* * ONE *of the most effectual remedies at present discovered for the treatment of this disorder;* and, "to whatever part it is to be applied, the greatest care "must be taken to fit it with every possible exactness. "If this be not particularly attended to, the truss, instead "of being useful, will be extremely injurious; for the "sole intent of these bandages is to press directly on the "opening through which the gut descended, or was forced "from its natural position: the strictest attention should "therefore be paid not only to the formation of the truss, "but to its application. *It too often happens, that the "person who makes the truss applies it; and this presumption on his part, and want of* CAUTION IN THE PATIENT, seldom fail to do mischief. A MAN MAY BE A "GOOD MECHANIC, and perform his work with ability; "but he alone can apply the bandage with effect, who is "acquainted with the anatomy of the human frame."

The meaning of the above passage is sufficiently obvious; but though he censures those who *make and ap-*

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* There is no fact in surgery better established than that a rupture can only be, palliatively or radically, cured by the application of a truss; what, then, does the author mean by saying the truss is ONE of the most effectual remedies, and does he mean to say in *the face of the world that there is* ANY *other?* Or does he only communicate this doctrine to his patients in private?

ply trusses, he cannot mean the censure to be general notwithstanding it is conveyed in general terms. To the MAY BE marked in italics, I shall add another equally true, *viz.* that a man *may be a good surgeon* without knowing much of mechanical science, or any thing of the practice of any mechanical trade: if such an one should undertake to direct ignorant workmen to make trusses, he would always produce something worse than would be made by a mechanic who happened to understand the structure of the human body so far as is connected with his own occupation: but, a man MAY BE contemptible as a surgeon, he may feel that the small quantity of his employment exceeds his desert: such an one MAY resort to the practice of a mechanical employment for which he is totally unfit; he *may* be conscious of this, and to further his project he *may* artfully combine a number of circumstances together so as to induce the unwary to believe *he is a very great man*, till they find their mistake by woeful experience, all these may be's combined should induce those who require professional assistance to examine CAUTIOUSLY the pretensions of those who obtrude themselves ostentatiously on their notice.

On trusses he says, p. 19, "The formation of these "bandages is now so generally known, that an elaborate "explanation or description of them might be *justly* "deemed superfluous: but, as many improvements have "been lately made in their construction, I think it neces-"sary to mention one, which, in the course of MY prac-"tice I have been induced to prefer.

"Those employed in general often produce consi-"derable uneasiness by a too great pressure on the lower "part of the hips. This, *I conceive, I have remedied by* "*making the pad droop more, and rendering the neck* "*longer and more curved.* The circular steel spring, by "these means, rests higher upon the loins, and, conse-"quently, must produce a less pressure on the hip joints, "an inconvenience which has been much complained of "by those who have been under a necessity of wearing "those bandages.

"The pad, or cushion, of this truss is likewise "broader than those in general use, with a prominence, "or slight elevation in the middle; while its sides, al-"though not perfectly flat, are considerably more so "than those commonly employed. Of this construction, "they apply with much more exactness, and sit more "firmly

" firmly on the parts, than when altogether round, as " they *are* commonly made, without any flatness on their " sides."

Whether Mr. Turnbull was unable to describe the structure of a truss, and thus evaded the difficulty by saying it was too well known to need description, or whether he thought the ignorant and indigent for whom he professes to write would not attend to all that his immense knowledge might have imparted on this subject, had he been so disposed, I will not undertake to determine: certain it is that there is nothing in the above passages but his *ipse dixit* respecting the inconveniences of the trusses generally used, and that which *he has been induced to prefer*, and which, from the egotistical manner in which it is mentioned, I presume, originated with himself: but, as the subject will admit of something like demonstration, and some few readers may wish to know more than he has communicated, I shall, perhaps, be excused for presuming to endeavour, at least, to supply the deficiency.

The maximum of pressure that can be made by a truss which acts by means of a circular spring will be made when the pad is in a direct line with the spring; but the form of the body and the direction in which the pad must be applied to the aperture does not admit of this, still, however, it is desirable to keep it as near the horizontal direction as possible, in order to obtain as much force as is necessary from the action of the spring to enable the truss to perform its functions: the spring must be circular to act with effect, and that part of the body on which the truss must lie is not of a circular form; this difference between the truss and the parts on which it is to act occasions most of the difficulties that occur in adapting trusses properly to the patients who wear them; and it is the power of overcoming these difficulties which constitutes an essential part of the *art of making trusses*; a power which I have no doubt many possess, and which, whoever does not possess, he can only be called an ignorant pretender to an art he does not understand: this being the fact, where are the inconveniencies which Turnbull has specified as often found in those generally used?

There are many ignorant workmen who pretend to make trusses, and as this description of persons sometimes offer to work cheaper than men of respectable character, they sometimes find employers, who at last discover that

such workmen are totally incompetent to perform what they have undertaken: if they are honest, in spite of their ignorance they will attempt to alter their work, in hopes of obviating the inconveniencies complained of by their employers: the consequences are obvious; not understanding the nature of the instrument they pretend to make, or the principles upon which its ease and utility depend, they blunder on from one mistaken notion to another without considering that all the inconveniencies complained of originated in their own ignorance.

There are a very few surgeons who from want of talents do not find employment in their own profession; and some of them have occasionally cast a longing eye upon ruptured patients, who are too often prone to become dupes to the impudence of ignorant pretenders: while the subject was imperfectly understood such people commonly degenerated into quacking rupture curers; but the present state of surgery has enabled its professors to render the stale pretence of curing ruptures too contemptible to be openly advanced by those who are not prevented by their honesty from defrauding the credulous and unwary who fall into their power: some plausible pretence is to be used as a lure, and more than one person within my recollection has used the following; that all truss-makers are ignorant; that they, the truss providing surgeons can direct them to be made in a superior manner, and therefore it is the interest of patients to apply to *these* surgeons in preference to any other gentleman of that profession, and in preference to any truss-maker whatever; the consequence is, that patients who are so ensnared pay the same for their trusses as if they employed men of the first character; they pay the undertaking surgeon for his superintendance, and they are worse served than any other description of patients for the following plain reasons.

1st. No man of character, who understands his own business, will degrade himself by doing business for such men, whose object is to purchase what they use at the lowest price, and charge *their* employers the highest.

2dly. Being thus excluded from dealing with men of character, they are necessarily driven to employ such ignorant workmen as they can find.

3dly. Finding such men are incapable of executing properly what they undertake, *they* themselves undertake

dertake to direct them in the execution of their work, thus the ignorance of the director acting upon the ignorance of the workmen produces additional inconveniences to all parties concerned, and this is the origin of most of the objections that are made to the principles on which the elastic truss, which acts by a circular spring, ought to be constructed. It may be said, that all this is irrelevant to the present question. This must be granted; for Mr. Turnbull has said so much of his own knowledge and experience, all which, I know to be true, that I firmly believe there is no person engaged in the same pursuits with himself, who is able to compete with him, how thankful, then, ought I to be that he has not exerted all his powers upon this subject! that he has only mentioned the frivolous, foolish objections that have been made to the principle upon which the best elastic truss is constructed, because some ignorant workmen have made bad trusses.

If what I have said on the action of a truss, properly adapted to the person who wears it, be compared with "that improvement, which, in the course of his practice, "Mr. Turnbull has been induced to prefix," it will be evident, that, by making the pad more *drooping* as he calls it, the point of pressure is removed from the center of action by which the pressure is to be produced: consequently, the power of the truss is diminished in exact proportion as the pad is so made to droop: another consequence arises from this; as the strap which fastens the truss is connected with the circle which, according to the improvement Mr. T. *has preferred*, goes round the body above the hips, it must draw the pad of the truss *upwards out of its place*, unless kept down by the powerful action of an understrap fastened very tight; and this produces serious inconveniencies from its pressure on that part it lies upon; but, if the spring goes as directly round the body as circumstances will admit, the pressure of the pad, and fastening of the truss will be nearly in the line of its action; it will keep firm to its place, in many cases without understrap, and in those cases where the understrap is necessary it will require less force, and produce less inconvenience than it must do when applied to *keep down* that drooping *pad which Mr. Turnbull has been* induced to prefer. Whoever has a truss that produces uneasiness, by galling the hips, may be assured, it is either made by an ignorant man, who knows not how to construct a truss

 properly,

properly, or, that it does not fit him, or that it is misapplied.

When Mr. Turnbull said, "the pad or cushion "of the truss he has been induced to prefer is "broader, &c. than that in general use," if he intended to convey any determinate idea he ought to have shewn what the form or size of that in general use is, if there is any form or size generally adopted: the fact is, that this part of the truss is made of every form and every size that can be adapted to the need or convenience of particular patients, and according to the degree of knowledge, to the caprice or the ignorance of those who make trusses. If Mr. Turnbull does not know this, I shall say nothing about his knowledge; if he does know it he must be sensible that he has used so many words to convey no information; though it will leave him at liberty to say, if he pleases, when any truss whatever is shewn to him he thinks it is not broad enough, but that he will advise one to be used that is broader, &c. &c.

Mr. Turnbull says, p. 54. "As trusses are considered "the most important and effectual contrivance for alle- "viating, and frequently preventing the disease from in- "creasing, I am induced to recommend *to all surgeons who* "*reside in the country, to provide themselves with an as-* "*sortment of these bandages, suited to the different species* "*of the malady, and the age, size, and sex, of the people in* "*general. I have experienced, in a variety of cases, the* "*happiest consequences by adopting this method even in the* "*metropolis, where trusses can soon be provided.* In many "instances, an *immediate application of the truss is of the* "*utmost importance, and therefore, I keep a quantity by* "*me, that a moment may not be lost in fitting them to the* "*part affected.* In many remote parts of the country, se- "veral days may elapse before the surgeon can be supplied "with a truss; and, when delivered, it is extremely pro- "bable, that some part of the bandage may be found de- "fective. The necessity, therefore, of providing against "delays which may be fatal to the patient must be ob- "vious, and therefore, I earnestly recommend to those "professional men, who reside in the country, to *provide* "*a competent assortment of trusses, and to have them made* "*in London by* THE MOST SKILFUL HANDS."

I have, till now, only considered Mr. Turnbull's performance as likely to be serviceable to the *patient*, but as it is now likely to be serviceable to the *truss-maker*, a moderate

derate portion of self interest induces me to wish particular attention may be paid to the passage above quoted.

I have found by an estimate which my professional situation has obliged me to make for many years past, that including every variation of the different species, &c. of the disease, age, size, sex, &c. of patients, it requires that I should have an assortment of at least one thousand trusses, before I have a tolerable chance to supply every patient on demand with the truss that will be properly adapted to his complaint: to reduce this matter to an absolute certainty it will require *double that number.* If then, every surgeon in the country, who may have occasion to send to London for one or two trusses in a year, can be prevailed on to keep such an assortment as Mr. T. recommends, by him, my business would increase a thousand fold, and as I do not pretend to be the *only good truss maker in London*, the same benefit will be extended to others; I expect to be implicitly believed, when I say most sincerely do I hope that every surgeon in the United Kingdom may adopt the plan recommended to them by Mr. Turnbull.

He, like a good advocate, has confined himself to such arguments as are likely to influence those he wishes to prevail upon to adopt his system; for this reason he has not said how this scheme may affect the patients; as gentlemen in secluded situations in the country may not understand what advantages are to be derived from the speculation, he tells them that "*he has experienced, in a variety of cases,* "*the happiest consequences by adopting this method even in* "*the metropolis*, where trusses can soon be provided."

As Mr. Turnbull has not told *what those* "*happiest* "*consequences were that he has experienced by adopting this* "*method* in the metropolis," I trust that I shall be excused for attempting in some degree to supply the deficiency in his information.

Mr. Turnbull, then, has, by getting himself advertised in the newspapers as surgeon to a society for supplying the poor with trusses, &c. induced many, who had no better means of information than those advertisements afforded, to believe that he has been selected from the surgeons of the metropolis to manage that institution, on account of his superior and more extensive knowledge of the subject; this belief, has induced such persons as have ruptures to apply to him for *advice;* the advice to a ruptured patient is to get a proper truss, and—*Pat,* Mr. Turnbull has it by him to apply instantaneously; the patient has no time

time for a reflection, or to seek farther advice; but, I presume, pays Mr. T. for his advice, pays for his truss and departs in peace.

I do not mean to suppose the advice given was improper, or the trusses sold were bad; but, as the infirmities of human nature lead all men to connect themselves with some gentlemen of the surgical profession, I do mean to express my belief, that, if they had not been diverted by this manœuvre of Mr. Turnbull's, they would have consulted those gentlemen with whom they were previously connected, instead of applying to him; these gentlemen might have directed them to apply elsewhere for their trusses, and thus he would not have experienced any of those *happiest consequences* he so feelingly describes.

But Mr. T. seems to fear, that surgeons in the country will not take his advice, he seems to think it possible that all patients will not consult a surgeon; for he "lays "down certain rules by which the patient will be com- "petent, by observing these rules, to give directions to "the truss-maker, who may send him a truss, however "distant the afflicted person and the artist may reside "from each other."

It certainly is whimsical, that Mr. Turnbull, after arguing to prove, that a patient should, on no account, apply a truss upon himself, without the assistance of a surgeon, should pretend to enable a patient to commit that very imprudent act, but such is the imperfection of our nature! As we have the rules, I shall mention those briefly which do not merit particular attention, and only make observations on such as do.

1st. Describe the cause of the rupture, &c.

2dly. Whether recent or of long standing.

3dly. Where situate, and on what side.

4thly. Its figure, size, &c.

5thly. Whether reducible or otherwise.

6thly. When the rupture is at the folding of the groin, describe whether it descends into the hernia, or, if the patient be a woman into the labia pudenda.

7thly. If the patient hath two ruptures, &c.

8thly. Whether the patient is lean or corpulent.

9thly. If he hath any deformities.

10thly. Of just measure round the body, &c.

The substance of these ten rules might be easily comprised in one short sentence; but they are thus subdivided and extended, to give an affected appearance of particularity

larity to a subject that must be obscured in proportion as it it is treated in a manner that deviates from brevity. The sixth in particular is a singular specimen of what may be effected by treating a simple subject in an affected manner. As Mr. T. has disclaimed all pretensions to the merit of treating his subject in the appropriate language of a professional man, he is only blameable in using the language of colloquial vulgarity, in a way that must lead those for whose use it is pretended he wrote it, into mistakes that may be of serious consequence. A professional man knows exactly the different situations of the bubonocele and crural hernia; but if the unprofessional reader could annex any idea to the words *folding of the groin*, he would naturally use them in describing the crural hernia, which never descends into the scrotum, TURNBULIZED, the purse; and if he described a bubonocele which descended into the scrotum, he would never say it descended from *the folding of the groin.* Though professional men may smile at the absurdity of this mode of description, the use of it ought to be seriously deprecated, as tending to do mischief by giving false ideas of the disease to those who are sufficiently prone to misunderstand it.

Mr. Turnbull says, p. 50, "It would be a criminal "departure from my original intention, were I to conceal "the melancholy consequences that generally ensue from "totally neglecting or treating this malady with inattention. To elucidate this, I will state, however painful "to my feelings, the common effects of a *strangulated* "*hernia*, which, in many cases, might have been prevented, had the disease been properly treated on its "original appearance.

"This is a state of the disorder which is created by a "strong compression of the parts through which the intestines pass, which will not permit them to descend or "return. The symptoms are, violent pains in the part "where the intestines become strangulated; and, as the "patient cannot void, he soon feels a nausea, which is "succeeded by vomitings of thick saliva. In a short "time, the excrements are discharged only through the "mouth; and, in this miserable state, the afflicted person "is in constant dread of suffocation. Profuse perspiration "or fever succeeds; the extremities turn cold; the eyes "become fixed, and assume a frightful stare; mortification comes on; but, at intervals, when the senses "return, the patient generally shrieks, or implores relief "in tones expressive of lamentation and despair. At

" length he expires, and in such a state of torture and " convulsion, as to delineate a scene of the most tran- " scendent and complicated wretchedness."

There are some circumstances in the above melancholy description, the truth and accuracy of which I am strongly inclined to dispute; but as they are intended to caution the unwary patients, and induce them to pay proper attention to themselves, I shall let them pass. I cannot, however, resist the inclination I have to observe, that Hudibras has justly said, " *No argument like matter of* " *fact is*;" an axiom that is peculiarly applicable to this subject, had it occurred to Mr. Turnbull when he was writing upon it. In the new practice he has lately engaged in, he must have come to the knowledge of many facts which would prove, that the ignorance, the impudence and knavery of many pretenders to knowledge in the treatment of ruptures, has occasioned much injury to those who have been dupes to their pretensions; and the exposition of these facts would have rendered more service to the cause of humanity than all the declamation he has written. As he has not done this, I can only lament the omission. I shall now take leave of the subject by relating a little anecdote, that will not be without its use.

Doctor Turnbull, *ci-devant* physician to the Eastern Dispensary, and provisional president of the society for supplying the ruptured poor with trusses, was taken ill one day after dinner: his disease was supposed to be inflammation in the bowels; every thing that the skill and tenderness of his friends could suggest for his relief was attempted, but, notwithstanding all the exertions of their skill, in twenty-four hours he was dead! When the proper persons came to pay the last sad duties to his remains, they found *a small umbilical hernia, strangulated and mortified*, and which, without the assistance of a Coroner's Jury, may be pronounced to have been the cause of his death.

Reader! if thou hast a rupture, remember the fate of Doctor Turnbull, and take care of thyself while thou hast yet power to avoid the same. Be not the dupe of those wretches who, equally destitute of principle and knowledge, only intend to defraud thee of thy money, though they frequently may endanger thy life; consult the most eminent professors of surgery on such occasions, and thou wilt be safe.

On the various Principles of constructing Trusses, and their Advantages and Defects.

Having examined, at some length, the works of four persons who have made themselves most prominent as inventors, or as promulgators of trusses which *they* are pleased to call *new* invented trusses, though there is some reason to think they are no *inventions at all*, it would be needless to proceed in the examination of others who may have even less merit or less notoriety; they all possess one property in perfect equality; each of them asserts that his own nostrum or invention is the only truly useful one, that is, equally applicable to all cases, and that every thing which differs from his must be pernicious, and therefore, it is presumed he means to insinuate, should be avoided. Now as each of those four worthies asserts or insinuates this in the most positive terms, and as each of them differs in the most positive manner from all the others in every essential point, it must follow that, whoever gives his faith to *any one of them*, must *necessarily suppose all the others are in the wrong:* but, there is a certain doctrine very generally credited among those who really understand the subject, that will lead to a different conclusion, viz. that each of them is right in the conclusion he draws with respect to the others, and each of them is wrong in the assertion he makes with respect to himself. The doctrine I allude to is this: that, as ruptures in different people continually vary in their principal circumstances, so much that two ruptures are very seldom found alike, every rupture requires a truss constructed, adapted and applied to its own peculiar circumstances. From this doctrine it follows as a necessary consequence, that every kind of truss may be useful in some cases and pernicious in others, but that no kind of truss can be useful in all. If this doctrine should be either admitted or proved, it will follow inevitably, that any man who declares he has invented or discovered any particular kind of truss which is applicable to all cases, declares that which is, in the nature of things, *impossible*, and, therefore, cannot be *true*.

As it is of general importance that this doctrine should be established, in opposition to the wretched and contradictory systems of quackery that are daily obtruded on the notice of the public, I shall endeavour to demonstrate the truth of it, as far as it is capable of demonstration, at least,

as far as my opportunities of investigating the subject will enable me to do so.

The simplest truss, whether we consider the construction, or the mode of applying it, is the belt-truss, consisting of a belt, or band to go round the body, a pad to press upon the aperture through which the rupture descends, and an understrap to keep the pad to its place: the mode of action, the conveniencies and the defects of this truss may, perhaps, be understood from the following explanation:

Any simple belt that is drawn close round the body will pass in a circular line so as to represent a horizontal section of that body: if it was of a substance uniformly hard, the bandage would adapt itself perfectly to the form of the body, if its form was circular, or of any form approaching to a circle; but if any part of the body was hollow, the bandage will not adapt itself to that part; because, the projecting parts on each side the hollow will form points between which the bandage will draw in a straight line, and leave the hollow untouched: if the body was uniformly soft, a belt drawn tight round it would press uniformly on every part, till the whole was drawn into a circular form, and could be made no tighter; but as the human body is composed of some materials that are soft and others that are hard, the effect of a belt drawn tight round it is of a mixed nature: it will compress the soft parts uniformly, till resistance is made by the bones underneath; then it will squeeze the soft parts between the bandage and the bones, and, if any of those bones form acute projections, the soft parts will be most squeezed there: of course, if a belt is applied and tightly fastened round the body for any long time, it must produce uneasiness from partial pressure; and, if continued for any long time, it must produce excoriations and acute pain. Perhaps this will be better understood by reference to the annexed figures. Figure 1. in plate 1. represents a horizontal section of the human body, at the part on which a truss is applied for the inguinal hernia: it is of a thin person, and represents the general form of the bones of the pelvis, when viewed in that situation, and thinly covered with flesh, preserving much of the irregular form of the bones in that part:* the dotted line on the outside is a belt drawn tight round

* These are not to be understood as correct anatomical representations of the parts, but as diagrams intended to illustrate the doctrine it is intended to explain.

Fig: 1.

Fig: 2.

Fig: 3

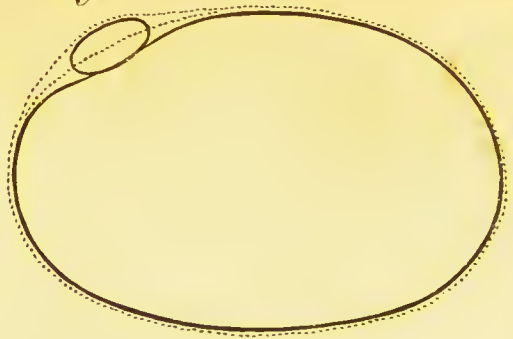


Fig: 4.

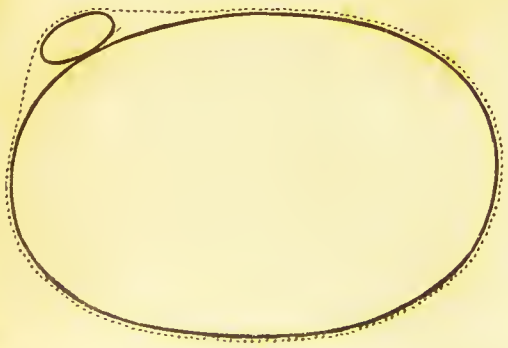


Fig: 5.

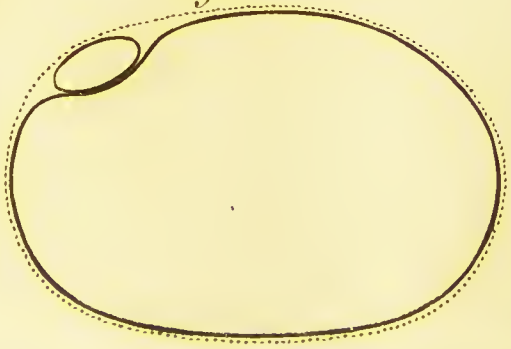
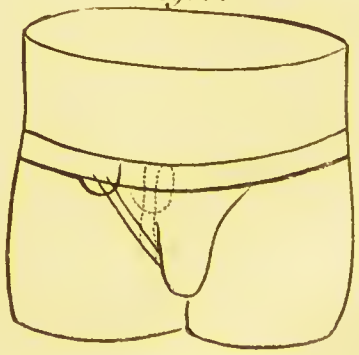


Fig: 6.



round such a body, and pressing closely on the hips and os sacrum, while it scarcely, if at all, touches the other parts. Figure 2. represents a similar section of a body well covered with flesh, and therefore of a more regular form; the dotted line within this indicates the form and position of the bones of the pelvis. It is easy to see, that if a belt was drawn tight round this body in the manner represented by the dotted line in fig. 1, it would seem to set equally close all round, but, in fact, the projecting part of the os sacrum and other bones of the pelvis would form points of resistance, between which and the bandage the soft parts would be compressed, bruised and excoriated; so that any bandage that should be constructed on this principle, and applied to keep up a rupture of any size, or in a patient subject to much violent exertion, must always render him liable to excoriation, and all the uneasiness and pain attendant on it; while, for other reasons that are to be explained, such a truss can never keep up his rupture with any certainty.

Those parts in which the inguinal and crural ruptures lie, are situate in a hollow out of the circular line of the bandage, and therefore less liable to the action of the bandage than any other: to obviate this the pad is provided, being a hard, or at least, very little compressible substance applied on the aperture, and kept there by the bandage round the body. It is supposed, on a superficial view, that this pad is, by fastening the belt, pressed so close upon the aperture, as to keep it perfectly closed, and thus effectually prevent the rupture from extruding. This undoubtedly may happen *sometimes*, but it certainly cannot take place in general to such an extent as to warrant the adoption of this kind of truss for the greater part of ruptures, for reasons that are sufficiently evident: 1st, when a pad is so introduced between the belt and the body, it acts equally upon each, as may be seen by reference to fig. 3, the elliptical line of which represents a section of the body; the dotted line, the belt going round the body, and the pad lying between the two. Now, if the body was perfectly hard, the pad would not depress it in the least, but would cause the girdle to remove from the body for a space equal to the thickness of the pad, as at fig. 4; if, on the contrary, the body was soft, and the belt was of steel or any incompressible substance, instead of being of soft materials, the pad would be completely depressed into the body, as at fig. 5; but both the girdle and the body being soft, and the pad of this kind of truss hard,

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follows of course, that it acts equally upon them both; in other words, if fastened moderately tight, it partly depresses the body, and partly forces the belt out of the circular direction, keeping itself equally suspended between the two. If a rupture could, under all the circumstances in which a patient must be placed, be kept up by mere juxtaposition of the bandage, this kind of truss might be sufficient for the purpose; but, as there are very few cases in which this can happen, something more must be done. If the belt is only fastened so tight as to lie close on the body, and keep the pad firm to the part, any exertion the patient may make forces the rupture downwards, and, not meeting with adequate resistance from the truss, it is immediately protruded: if, to prevent this, the belt is drawn tighter round the body, it must inevitably follow, that it will produce more additional pressure upon the hips than it does upon the rupture; and, if increased and kept up for any considerable time, intolerable pain and perpetual excoriation must be produced without adequate advantage. Another defect in this truss arises from the inevitable action of the under-strap.

The aperture through which the inguinal hernia descends, is situate in the fore part of the abdomen, not *directly* over the perineum, but obliquely and much nearer the side of the body, as it is represented at fig. 6, which shews a front view of the body, and represents the situation of the truss and understrap. There are two reasons for using the under-strap with this truss: 1st, to prevent the truss from sliding *upwards* out of its place, which is the general reason for using understraps with all trusses; and, 2dly, it is very common for those who apply these trusses to make the pad of an oblong form, and situate below the line of the girdle; therefore they depend on fastening the under-strap very tight, to produce *any* pressure by the pad upon the part: the consequence is, that by fastening the under-strap very tight in an oblique direction, the pad is necessarily drawn *forwards* out of its place, till it comes into a perpendicular situation directly over the perineum, as it is indicated by the dotted lines on the plate, and the rupture of course permitted to descend. From what has been said, the inconveniencies and imperfections of this kind of truss are so great and evident, that it is not surprising it has long been laid aside by every well-informed practitioner; but it is *very* surprizing that any person should attempt to revive it, and introduce it as a *new invention*, as such an attempt is a proof of more ignorance,

ignorance, as well as assurance, than one would willingly attribute to any person who would pretend to be considered as a professional man.

In discussing the merits of the above species of bandage, I have adhered to the *general principle*, as consisting of a belt, a pad, and an under-strap; but it must be observed, that all these parts have been made by different workmen in various manners; particularly the pads have been made with springs, under the idea that *these* will produce more pressure than those pads which have no springs. This is certainly true, and therefore they are *something* better; but still, as they possess all the radical defects of this species of bandage, they are justly considered as equally imperfect in point of principle, and therefore have been equally and justly exploded.

The only cases in which it is adviseable to use trusses of the above description, are in persons who have ruptures that are extremely slight, and who are not called upon to make any kind of exertion, or when it is thought adviseable to wear a bandage in bed, and the bandage generally used is found to be irksome: in such cases the bel'-truss, of any description, may be used without impropriety; but whenever it is applied to persons in situations different from the above, it will always prove to be either the most irksome or the most ineffectual bandage that can be used.

The next species of truss that has been adopted, was that which was formerly called, in contradistinction to the above, *the Steel Truss*. It was made of a strong bar of iron or steel, fitted as near as might be to the shape of the body: to this a pad was applied and fastened round the body by straps in the usual way. This was found to be so inconvenient, so inadequate, and so extremely dangerous, that it was very soon universally exploded: it would therefore be needless to enter into any description of its principle, if attempts had not lately been made to introduce, as a *novelty*, a bandage made upon this very principle, which, for that reason, it may not be improper to explain, in order to shew its inefficacy.

It is certain that, in respiration, the expansion of that part of the abdomen on which a truss is to be applied, varies at *least* an inch in a middle sized man, and in larger persons the variation is still greater every time they breathe. In consequence of this peculiarity, a truss of this description, having no motion or elasticity, must either fit the body in its enlarged or in its contracted state; if it fits in the former, it must be too large and too

too loose in the latter state, of course it must allow the rupture to descend, and then the patient will be liable to all the consequences of strieture from the pressure of the truss; if, to obviate this defect, the truss is made to sit close enough to keep the rupture up effectually, while the body is in its most contracted state, it must press with increased violence every time the abdomen is enlarged by the act of inspiration, besides, the pressure of such a bandage, acting perpetually on the spermatic vessels, as well as on all the soft parts which lie between the truss and the pelvis, must always produce inflammation and excoriations of those parts: this actually did take place in most of those who used these trusses, and occasioned them to be disused: and this has already happened to many who have used those which have been made by the man who has taken a patent for trusses made upon this principle, which he calls *new*, and will, undoubtedly, soon occasion *them* to sink into oblivion.

As the elastic truss has long been in general use, its merits are very well known: as it is well known too, that, in some cases it is defective, but as it may be said with confidence, that no other invention (taking the word in its general sense) is likely to supercede this, it is certainly worth while to ascertain and remedy its defects, and thus give it all the perfection that it may require or be susceptible of. As a rupture is formed by a portion (greater or less) of the contents of the abdomen, extruded through the containing parts, by various efforts made by the patient, in different situations of life, it is obvious, that the force it exerts in extruding, must be proportioned to its own bulk, and the violence of the effort that produces it: the remedy is, first, to reduce it, and afterwards retain it in its natural situation, by some extraneous substance, that shall be applied so as to cover and keep itself, on the aperture through which the parts have descended: this is the use of the truss.

It has already been shewn, that simple bandage connected with pads, and that either have or are without springs, cannot effect this purpose; nor can it be effected by *solid pressure*;* it remains then to shew *how* it is effected by elastic pressure, before we can explain the real defects of

* I use this for want of a better term, as a contradistinction to elastic pressure.

of the instrument to be employed, and the improvements of which it is susceptible.

The elastic truss consists of a spring that goes either wholly or in part round the body, and a pad to lie upon the aperture through which the rupture descends; besides proper straps for fastenings, &c. the spring, which is the acting power, is formed into a circle, or part of a circle, or rather parts of different circles, it is extended to be placed round the body, and, by its efforts to contract itself till it reaches a state of rest in its original form, makes that pressure which is to keep up the rupture.

It is evident that this pressure is essentially different from that which can be produced by a pad, when secured on its place, by a belt drawn tight round the body, or by the dead pressure of a solid iron or steel hoop; it may be exerted to any degree that it can possibly be required, but, it may be so exerted as to be productive of serious mischief in many cases; it may, therefore, not be improper to explain some of the principles upon which the proper application of this pressure depends. The strength of the truss should be rather more than, or at least equal to the force with which the parts, which form the rupture, are propelled downwards by their own weight, and acted upon by any exertion the patient may use: this pressure must be absolute, or the rupture cannot be kept up: what, then, it may be asked, is the use of the elastic or flexible power of the truss? why is it superior to the dead pressure of the old iron or steel truss? the following are some of the reasons which seem to prove its superiority:

A certain force is requisite to keep up a rupture of a given size, and this force must be constantly and invariably applied, or the rupture will, in many situations, descend: but the parts in which the apertures through which ruptures descend are situate, are subject to many and great variations in respiration, in difference of position from many actions, as stooping, sitting, riding, &c. &c. the elastic power of the spring is intended to follow the parts through all these variations, in many cases it does this effectually; in others less perfectly, but in all, it certainly does, when properly adapted and applied, do this more effectually than any other method that *has been*, or perhaps that *can* be devised.

Besides possessing the *actual strength* that will be required to keep up the rupture to which it is to be applied, the spring of a truss should have as much flexibility as it possibily can have, consistently with the requisite strength,

as it is that flexibility which secures to the patient all the ease it is possible to derive from the use of the truss, and it is from the rigidity of the spring, supposing the truss to be, in every other respect proper, that the patient will derive perpetual and unnecessary uneasiness.

As the apertures, through which the different kinds of ruptures pass, are differently situate in the containing parts of the abdomen, they are liable to vary continually by its contraction and extension, in respiration as well as by the positions it is thrown into by the numerous actions which every person is sometimes called upon to perform: as these variations of position are very considerable, the flexibility of the spring only can enable it to follow them, so as to keep up the rupture with ease: it is true, that a rigid spring may, in some situations, keep up a rupture as well as a more flexible one, if that was the *only consideration;* but some attention is due to the comfort of ease, and more is necessary to avoid the danger that may arise from the contrary effect: for, it is certain that pain can never be long inflicted on those parts that are connected with rupture, without producing mischief. *

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* There is no doubt, but very serious injuries are often the consequence of violent pressure from trusses that are improperly applied: those who sustain such injuries are not willing that they should be known; and, therefore, but few instances occur that can be authenticated publicly. The following happened within my own knowledge:

"SIR,

"Having lately, by accident, discovered your publication on rupture cases, I have been induced to purchase it, and being so unfortunate as to be afflicted with one, I have taken the liberty to write to you on the subject, and when I have submitted the real state of my case to your consideration, shall think myself particularly obliged if you will favour me with a line what steps you think most proper for me to take on the occasion.

"I am now about thirty-three years of age, and when I was not more than fourteen years old, I discovered a small swelling on the right side, but did not then know the cause, nor did I feel any great inconvenience till about the age of twenty-one years, when the prolapsion was so painful I applied to a country apothecary, who supplied me with a truss very incompetent for the purpose. I afterwards made use of an *elastic truss for some years*, but did not make any application to the proprietor of them *till within these four years, at which time, and ever since, when I have applied to him he led me to expect a radical cure.*

"Now my own observations on my case, prove what you say to be strictly just, and believe I never must expect any thing beyond the partial cure of a well adapted truss. The rupture keeps up tolerably well, but I am afraid the spermatic vessels have been much injured, as

One of these empirics who has obtained or purchased a patent for a truss as *a new invention*, which has long been exploded as the most pernicious and mischieveous of all the older trusses, and had no previous knowledge of the subject he was engaging in, founded his principal claim to notice on his being able to make the springs of trusses *stronger than can be made* by any other method; it requires less knowledge and more assurance to make such an assertion as this, than it would *seem* liberal to attribute to any person whatever; yet, as it has been made, he is to take all the consequences: the truth is, that it is *easier* to make *a strong spring*, *i. e.* a spring that shall *press very hard upon the part*, than it is to make a slight one; but the real difficulty in constructing the springs of trusses is to make *a strong spring that shall be easy to the wearer*: this is so much the case that

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as the testicles are very much reduced, and have for many years experienced a want of that vigour which I am certain a perfect state of good health would have furnished me with, had not this unfortunate circumstance prevented it.

"The distance I live from London is 100 miles, yet I would most willingly embrace the first opportunity of waiting upon you in town, and believe I can make it convenient to my business to be there for a week or ten days, in about a month's time, and could I but have any hopes of success in the recovery of that manhood I am at present so unhappy to feel the want of, or could I be assured that any truss could be so adapted to keep up the rupture, and at the same time to recover the circulation, it would relieve me from the most heart-felt anxiety and disquietude."

"I am, Sir,

Mr. Sheldrake. "Yours, &c."

I had soon an opprtunity of seeing this patient, who appeared to be a stout man, and in perfect health: his ruptures (for he now had one on each side) were not remarkably large, but the testicles were reduced to less than half their natural, or the common size; he assured me the decrease began within a few years, that his trusses constantly gave him pain in the parts they pressed upon, which pain likewise extended to the testicles, and made them constantly feel uneasy and tender; that he observed them to continue decreasing: and his virile powers were nearly gone. As I saw no reason to suppose they could be recovered, or the testes regain their natural size, I gave him my opinion to that effect; advising him, however, to consult Mr. Hunter, or any other experienced surgeon, who would give him better advice than I could: there was little encouragement to hope that his rupture could be cured, but I thought I could engage to adapt a truss that should effect a palliative cure without farther injury to the testicles: this however, was a matter of no small difficulty, but with some trouble, I adapted a truss which he could wear without feeling the least uneasiness, and he left me perfectly satisfied.

it will be found universally, that where the common workmen who venture upon business of this kind, undertake to apply trusses to ruptures of any size, they substitute strength for skill: finding (though they do not know it is because they know not how to adapt a truss properly) that one truss does not keep up a rupture, they substitute a *stronger;* and thus go on progressively, till they apply more strength than it is possible for any human being to bear with safety; if by this means they *do* succeed in keeping up any rupture it is at the expence of producing inflamed spermatic vessels, testes, &c. and perpetual excoriation wherever the truss is in contact with the body; but they more frequently do not succeed, their patients' ruptures descend, and then being acted upon by such violent pressure, the most pernicious, often the most fatal consequences are produced: the *improvement* of this person then, if it answers his description of it, is an aggravation of the common defect of those trusses which are made by the most ignorant workmen; experience has proved it to be so, and it will soon return to that oblivion from which he has attempted to redeem it.

Though nothing but much practice combined with accurate and experimental knowledge of theory, can enable any one to construct, adapt, and apply, trusses with all the care and safety with which they may be applied; yet, as it is of consequence that the mischievous tendency of the above-mentioned doctrine should be made evident, it is hoped, that the following attempt to explain the theory on which trusses should be constructed, will enable those, to whom it is of importance, to form a correct opinion on the subject: The whole force with which any spring can act is equally divided between the point of its extreme contraction and that of its full extension; thus, if the whole force with which the spring of a truss can act, when on the body, is equal to ten pounds, and its form is such, that, when taken off the body and suffered to fall into a state of rest, the pad shall pass over a space of ten inches,* every inch of that space is equal to one pound, or one tenth of the whole force. The resistance that is made to the truss is, first, by the rupture attempting to protrude; and, secondly, by expansion of the abdomen in respiration. The variation in size of the abdomen is nearly one inch in res-

* See plate 2, fig. 2.

respiration; if then, the force of the rupture is equal to nine pounds, and a truss, whose spring is such as has been described, be applied, the rupture will be most effectually kept up, and with as much ease as the nature of the case will admit, because all the force that is necessary will be applied to the rupture, and *no more* than is indispensably necessary will impede the freedom of respiration: but, if a truss the whole power of whose spring is equal to ten pounds, and whose range of extension and contraction is but three inches, should be applied to the same rupture, it would be equally well kept up, it is true, but the patient would be in a state of perpetual uneasiness, because more than one-third of the force of the whole would be employed in counteracting the freedom of respiration; and, in consequence of the peculiar manner in which the spring of a truss acts on the body in its whole circumference, it will perpetually produce galling pain in every part it touches.

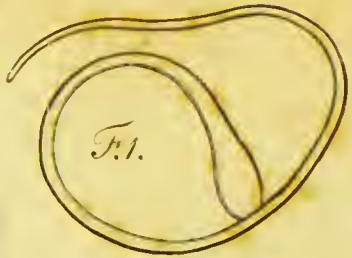
It is more difficult to make trusses of the lighter construction, than of that which has been last described; indeed that part of the subject is so far beyond the comprehension of the common people, who pretend to make trusses, that they almost always fail; in attempting to get *strength*, they get clumsiness and rigidity, and thus lose all the benefit that should be derived from the principle of elasticity so adapted and applied, as to produce uniform compression on the rupture in every situation the patient may be placed in: such workmen may dispute with each other *who can make the strongest trusses*, and when *that* point is settled, it will be found that the *strongest truss is the* WORST, because it will be the most uneasy, and because that kind of truss will always produce excoriation of the integuments, and frequently inflammation of the spermatic vessels, and every viritable part connected with them.

From what has been said, it appears there are three species of bandages; 1st, that whose pressure is produced by the action of a belt bound tight round the body; 2dly, that whose pressure is from an iron or steel hoop, (or a very strong spring possessing similar properties) whose circumference is less than that of the body, and produces its pressure by squeezing the body within it; and 3dly, the elastic truss, whose effect is produced by the action of a spring constantly exerted upon the part: the superiority of the last, both in theory and practice, is so evident, that from the time of its being first made public, it has gradually and almost

almost universally superseded every other; and, it is extremely probable, will always maintain its superiority: yet, though the principle is the most perfect, the application of it is in many cases imperfect and improper; and must always be so, so long as any one modification of it, or, to use other words, so long as any person will apply trusses of one form or construction to all sorts of ruptures, or to the ruptures of all persons, however different they may be from each other: this is, unfortunately, a very general practice, and in hopes of putting an end to it, I shall endeavour to explain how far trusses of different constructions are applicable to patients who have ruptures that are in essential points, different from each other.

The grand principle to be acted upon is, that the truss should produce its full pressure directly upon the part, so as to keep up the rupture effectually, and impede the freedom of action, in any respect, as little as possible; and that it should keep firmly to its position, in every situation the patient should place himself in, with as little assistance as possible from straps or any other extraneous mode of fastening.

The most general method of making the truss for inguinal or crural hernia, is to make the circular spring between one-half and two thirds of the circumference of the body, the pad is at one end of the spring, and the belt, which goes round the whole body, has a strap at the end which fixes on proper fastenings that are on the pad: the spring of this truss should be of such a form that when opened to be placed on the body, it should set as close as the form of the body will allow; if it is too large, it will be uncomfortable and unsteady, of course it will not keep up the wearer's rupture with safety; if it is too small, it must be squeezed on to the body to get it into its place: the circle of the spring being smaller than the body, must compress some of the soft parts; its own action, as a spring, must be impeded, and then it must be both ineffectual and continually painful: this objection, though frequently made to trusses *in general*, is, in fact, only an objection to the improper construction and application of them, by those pretenders who are too ignorant of the subject to know what ought to be done, and, perhaps not capable of doing it if they had the requisite information: but the uniform experience of many thousand patients, who have worn trusses of this description during the seventy years that have elapsed since the invention was first made public, has proved,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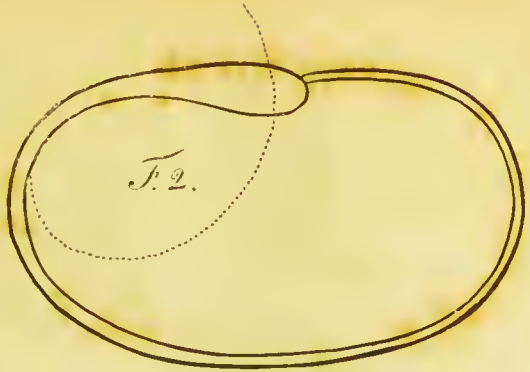
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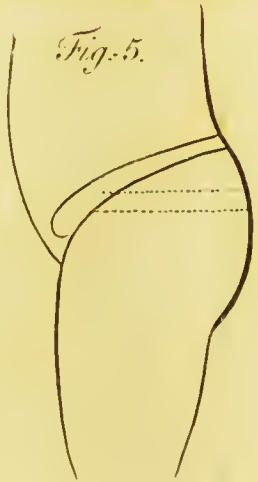
Fig. 5.

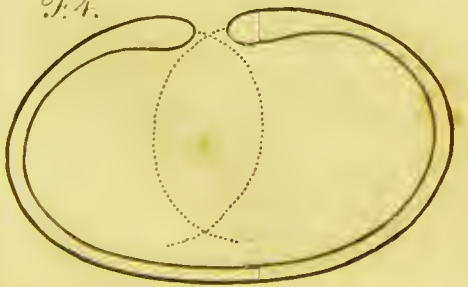
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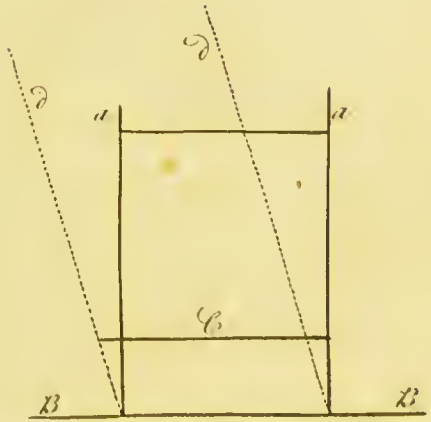
Fig. 6.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proved, that, in much the greatest number of cases that occur, this is the most proper; because the most simple and easy kind of truss that can be employed; and it is to be regretted that the attention of patients is not effectually directed to their own situation at that early period of the disease, when this species of truss would be sufficient: for, though it may gratify the feelings of a professional man to know that he has rescued his patient from the effects of a dangerous disease, or those of a patient to know that he has escaped from imminent danger, yet it surely would be better, if, on the first approaches of the disease, such a remedy was to be applied as would prevent it from becoming dangerous, and at the same time so easy in itself as to be used without inconvenience.

Plate 2. fig. 1. represents a truss, of this description, in a state of rest; the dotted line describes the form of the body it is to be applied to when open; from these figures it is presumed the nature of its action may be understood: in ruptures that are not remarkably large, or in patients who do not subject themselves to violent exertions, this truss will answer every useful purpose; but for those who have bad ruptures, or do make violent exertions, or are in situations that will be hereafter described, this kind of truss will be imperfect and insufficient; the particular defects will now be explained, and the means of obviating them pointed out.

The spring of this truss produces its effect by contracting, in an horizontal direction, round the body: it is opened when put on, the pad is placed on the aperture through which the rupture would protrude, and the spring, by endeavouring to contract itself, presses the pad upon the opening and prevents the extrusion of the rupture; the straps, &c. are only intended to keep the truss in its place; in ruptures, such as have been described, this is abundantly sufficient; but, for larger ruptures, or for the ruptures of persons who are called upon to make violent exertions, if a truss of this construction is employed, as it acts by contraction round the body, and the spring must be very strong, that contraction will produce uneasiness so far as the spring lies upon the body; if the straps are fastened tighter with a view of producing more pressure, by so doing the pad of the truss may be drawn forward out of its place; if it does not do so, such fastening of the straps must inevitably produce uneasiness upon both hips, and in the whole direction of the thigh-strap; and thus perpetual uneasiness

be

be kept up, and a very imperfect remedy be obtained; the most effectual and the easiest will be to resort to a truss of a different construction.

When Mr. Squire invented his method of making trusses with the springs to go all round the body, it was strongly rscommended by Mr. Hunter and his school; it was very extensively adopted in practice, but many patients have been obliged to discontine the use of them, and Mr. Timbrel * the *Dictator*, who censures in the strongest terms whatever does not coincide with his *omniscience* on this subject, writes in terms calculated to excite horror at the bare mention of this truss: amidst such contradictory opinions, but particularly in opposition to such weighty authority as that of the *Dictator*, it may seem unpardonable rashness to say, that trusses of the above-mentioned description should *ever* be used, yet even that rashness must be exceeded on this occasion by a declaration that, in many cases where much pressure is to be applied, and where it is particularly important that that pressure should be most steadily directed to keep up a difficult rupture, with very little assistance from straps or other extraneous fastenings, this description of truss is the *most effectual* and *most easy*, and therefore ought to be adopted: but as no *assertion* should be valued on a subject that is capable of being proved, it may not be amiss to *attempt*, at last, a demonstration of the truth of this assertion.

Fig. 3. plate 2. represents a double truss made of one spring to go all round the body, this truss is in a state of rest: fig. 4. represents the same truss, opened as it will be when placed on the body of the wearer; the dotted line marks the direction in which the pads would move, if the truss was taken off the body and suffered to collapse into its natural form: it is evident upon inspecting the truss described, fig. 1 and 2. that when that truss collapses, it must contract its whole circle at the same time that it produces any pressure, and, if the spring is strong, it must contract its own circle *greatly* before it can much increase the

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* As this *great personage* has discovered that no one who thinks differently from himself on these subjects, can possibly be in the right, and as I wish to avoid the imputation of misrepresenting his opinions or *assertions*, I shall quote the following passage *verbatim* from the 1st and 2d editions of his *new inventions*. "The double truss should be UNITED "behind by a double tongued buckle and straps, to let out or take in; "not *by one horrid hard steel spring, cutting the loins to pieces.*"

the pressure of the pad, *therefore*, its force must be felt *at least as much* in the whole circumference of the spring, as it can be under the pad, *when only* the pressure is wanted: but it is evident that when this truss collapses, by which means its action on the ruptures is produced, the pads at the two extremities of the spring have the greatest quantity of motion, and *therefore* make all the pressure they are capable of upon the apertures through which the ruptures descend *before* any material alteration has taken place in the form or diameter of the spring, and for the same reasons it must be easier than that which cannot press at all, without contracting itself at the same time all round the body, and of course, producing uneasiness from pressure on every part it lies upon.

Why then, it may be asked, is it acknowledged that so many have laid these trusses aside because they were found to be uneasy? First, because it was a false doctrine advanced by many professional men who at that time recommended them that too much pressure could not be applied to a rupture; that great pressure was useful by producing adhesion and of course a radical cure; but they did not consider that the good effects of such practice, were at best but precarious, while the injury that must be done by inflammation, produced by violent pressure on parts connected with the rupture would be great and certain; but Mr. Squire being a mere workman without pretensions to professional knowledge, acted honestly by the advice of those who took him under their patronage, and made the springs of his trusses as strong as he could; when patients complained of pain from pressure, they were told it was for their good, the greater the pain the greater the irritation, and consequently the sooner adhesion, and of course a radical cure would be effected: so many as had not the requisite degree of faith to try this practice, abandoned it at once; whilst those who had, did make the trial for the requisite time, and finding it did not succeed, abandoned the scheme, and joined the former party in decrying the *poor truss*, instead of the false principle upon which it was endeavoured to adapt it to their use.

Another objection to this truss arose from some difficulties in the construction, which the common workmen who are employed on this subject neither understand, nor, if they did, would be able to remedy, viz. that of so proportioning the curve of the spring to the shape of the body, that it shall press on the part without pressing unequally on

the body: if it does not do so, it must be evident that wherever unequal pressure is applied, either upon the hips or os sacrum, pain and excoriation must be the consequence: but this defect is to be attributed to the ignorance of the workman, not to the principle of the instrument, which when skilfully adapted, certainly, in many cases, possesses many advantages over those which had been previously used.

It has been said already that when those trusses which are made without any springs are fastened very tight, they are liable to be drawn out of their places; and it has been said, that when the truss, whose spring only goes in part round the body, is fastened tight, it is sometimes liable to the same inconvenience, but this can *never* happen with the truss whose spring goes entirely round the body for this reason: the body, in that part where the truss lies, is nearly elliptical: the bones of the pelvis from the ilium on one side round the os sacrum to the ilium on the other, form one mass which gives it invariable solidity; the abdomen in which the apertures through which the ruptures extrude are situate, forms the front, which varies in size during respiration and on other occasions; it is evident then, from this state of the case, that, if the truss, fig. 4. be so adapted to the form of the body that it sits uniformly and close all round, and the pads lie directly upon the apertures which are indicated by lines AA, and it shall be found necessary to fasten the truss as tight as possible, the spring will be drawn uniformly closer to the body without partial pressure on the hips or back*, the pads will be kept closer on the apertures, and the expansive power of the abdomen will be diminished, so as to give a sensation of uniform tightness in the whole circle occupied by the truss.

As the idea of using trusses that shall keep in their proper situation without being fastened with straps originated with the truss we are now considering, and as its advantages, real or supposed, seem to have been misunderstood, this will be the proper place for considering that part of the subject:

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* The effect of this is peculiarly striking, when contrasted with that of the belt truss under similar circumstances: it has been already demonstrated, that when the latter is fastened tight, the soft parts yield wherever they can, and pressure is made *partially* on the bones, and thus pain and *excoriation is produced*; but this cannot possibly happen with the circular spring however tight it may be fastened, the spring forms a circle corresponding to the form of the body, and the bandage however tight it may be acts upon the spring only, and contracts its circle only, without the possibility of producing partial pressure.

subject: as none of the trusses that had been previously used were found to keep well in their places in cases of much difficulty, recourse was had in such cases to various modes of fastening by buckles, straps, &c. the inventors of which were willing to pique themselves on their ingenuity, though it only ended in galling their patients with troublesome and painful ligatures of various kinds: no sooner was it discovered that this truss kept its place *better* than any other, and with *less* fastening, than it was supposed that it *might* keep its place without any fastening at all; it was tried in some cases with success, and the spirit of exaggeration, which so frequently exerts itself on such occasions, immediately declared that no strap or fastening of any kind was necessary to be used with that kind of truss: the experiment was universally tried and most commonly failed; yet, the truth is that some ruptures *may* be kept up by a truss of this kind without any strap, *but no rupture can be so kept up* without a truss is used which is much stronger, and of course more uneasy than it would be necessary to use, if the ordinary mode of fastening was employed, and, in much the greater number of cases no degree of strength in the truss will enable it to keep up the rupture without the usual mode of fastening it be employed: as it is of consequence that this should be well understood, it may not be unacceptable if an attempt is made to explain it here.

It will not be difficult to ascertain what degree of force will keep up a rupture during the exertions the patient *usually* makes, and by applying a truss whose power shall be greater than the force usually exerted by the patient, his rupture will certainly be kept up so long as he does not exceed his usual exertions, because the spring passing all round the body in the manner that has been already described, will certainly keep the pads in their places; but it is impossible to calculate what force may be exerted by a rupture when propelled by a violent and unexpected exertion; the attempt to counteract it can only be made by applying a truss whose power shall be extremely great, and therefore perpetually uneasy, at the same time that it may be incapable of resisting the effect of a sudden action; and if a rupture is by violence forced down under such a truss, the pain, the danger and the actual mischief will always be very great: perhaps the most proper method will be to let all the pressure that is necessary to keep up the rupture be made by the truss alone; but to apply a strap to fasten it in such a way that no exertion of the patient can possibly force

the

spring outwards, so far as to allow the rupture to extrude: this method will combine the advantages of super-pressure (if I may use such an expression) from the spring, and a positive check from the fastening whenever each shall be necessary.

Another subject connected with that under consideration, is the use or the abuse of understraps: but few years have elapsed since the quacks of that day who endeavoured to recommend themselves to notice without knowing what was really deserving of approbation, pretended to have infallible methods of making trusses that should be worn without any understraps: the tables are now turned, and the heroes of the present day are exerting their ingenuity in inventing understraps, and compresses, and buckles and fastenings, without end. Mr. Timbrell, the dictator, who stands at the head of this class, and expects that his *ipse dixit* should, on this, as on every occasion, be received with all the veneration formerly bestowed on the oracles delivered by the priestess of Delphos, says, *he* has invented a new understrap, a new buckle, and a new mode of fastening; without which, *he* says, no truss can be worn with safety: venerating his knowledge and wisdom, as we must do, we must with great diffidence suppose it has been proved that every truss whose power depends upon the tightness of its fastenings must be bad, because it is uncertain and unnecessarily painful; but, if we do believe this, we shall be tempted to ask, what is the real use of the understrap?

If that doctrine which it has been the intention of these pages to maintain, should be admitted, viz. that the truss should keep up the rupture by its own elastic power, and that the fastening round the body should prevent any violent exertion from overcoming the power of the truss, it will follow, as a collateral fact, that the under strap can only act as a check to prevent the truss from getting out of its place in another direction: the disease is dangerous, the truss is a necessary inconvenience, and the under strap is another inconvenience, often, but not always, equally necessary. The truth is, that some persons are so formed that no truss will keep in its proper situation upon them without an under strap, to hinder it from rising up out of its place on the most trivial motions in walking, riding, &c. But much the greater number of patients may wear their trusses without any understraps, and perform all the ordinary functions of life in safety: yet as no man can be certain that he shall not be called on to make violent exertions

ertions when he may not be prepared for them, every patient will do well to keep an understrap on his truss as a safe guard in time of exertion, though not as a matter of prime necessity; the understrap should be so fixed and fastened as to *keep the truss to its place*; but never so as to act in compressing the pad upon the aperture: it is true, that with bad trusses this is frequently done to supply the deficiency of power in the truss, but it is a bad succedaneum, and with good trusses never can be necessary.

Having several times used the term circular spring, it is necessary to explain the sense in which it is to be understood: by the circular spring of the truss, then, is to be understood that spring which goes round the body, whatever the form of the body, or the precise form of the spring may be. It is the more necessary to give this explanation because Mr. Timbrell, by whose side I have moved longer than can be agreeable to either of us, has used the same term in a very different sense. He says (p. 17, 1st edit.), "continue the hoop part or parts in a TRUE circular line round the body, the spring of the truss being made in a TRUE circular line." As this description cannot possibly be true in any sense that the words can be understood, and as those who may favour Mr. Timbrell with implicit confidence on this subject, will probably form very false opinions on this subject, it cannot be improper to explain the real state of the facts.

First, as the body is not circular, and the truss should be made to fit the body, it cannot be circular in any other sense than that in which I have used it, and therefore can never be made in a TRUE *circular* line: and, secondly, in fig. 5. pl. 2, I have drawn the profile of the body of a well formed man of moderate size: and most people may prove the truth of the facts it is meant to explain, by comparing it with any subject that is within their reach; when standing erect, the back of the pelvis from the upper line marked on the sketch, to the most prominent part of the nates indicated by the lowest line, deviates from the perpendicular in different subjects from five to twelve to fifteen degrees (it will do for the present argument to take the lowest number,) and the front of the abdomen from the height of the navel down to the lowest part of the pubis, inclines inwards from the perpendicular as much as the opposite side does outwards, in well made subjects, but in fat unwieldy people much more; the following consequences inevitably result from the facts above stated:

The

The spring of a truss is made of a flat piece of steel bent into a form partaking more or less of a circle, and being laid upon a plane surface, would act, by contraction and extension, in a horizontal direction upon the plane it is laid on; but, being applied to the body, the flat surface of the spring would adapt itself to the flat surface of the body, and clasp itself directly round it, and, of course, if the two sides of the body shewn in the sketch were perpendicular to the horizon, the spring going directly round the body, its edge when viewed in profile, would really lie parallel to the horizon; but, as the body inclines five degrees out of the perpendicular, and the spring naturally preserves its horizontal situation with respect to the body, must necessarily deviate five degrees from its parallel situation with respect to the plane of the horizon: this is what Mr. Timbrel, in the plenitude of his knowledge, would call from its *appearance* on the body, acting in an oblique direction, yet it is evidently the natural, true and perfect action of the spring when placed upon the body, and in which it would maintain itself with the greatest ease to the wearer, and the most effectual for exerting its full power on the rupture without the least assistance from understraps, except for the reasons that have been already mentioned; yet this is, undoubtedly what Mr. Timbrel, looking at the sketch, would call an oblique line of action, and pretend to remedy by drawing down the back of the truss, and keeping it down by tight straps, and new invented double tongued buckles, and heaven knows how many other infallible discoveries.

Fig. C. demonstrates the body thrown forwards out of the perpendicular as it is in nature, consequently, the horizontal line is raised obliquely with respect to the plane of the horizon, notwithstanding it preserves its horizontal position with respect to its own perpendicular: the dotted lines shew what would be its proper position, if its own sides were perpendicular to the horizon of the plane it stands on.

Thirdly, If we may judge from the model that has been sent by Mr. Timbrel to the Society for Encouragement of Arts, &c. which was evidently made to fit the truss that accompanies it, as it does not resemble any human being that ever existed, it is his opinion that the front and back of the body are perpendicular to the plane on which a person stands, of course when he says the spring is to continue in

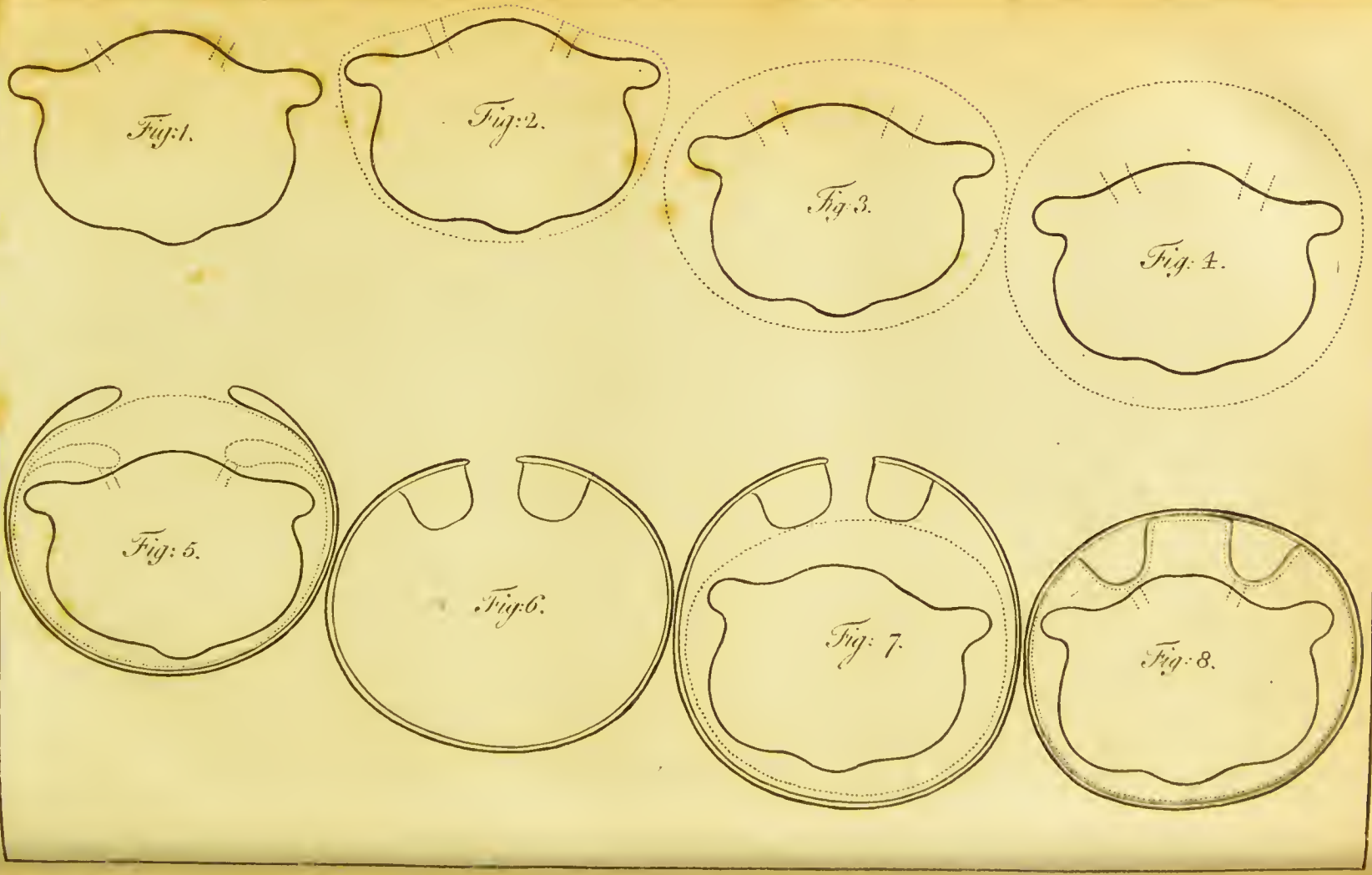
Fig: 1.
Fig: 2.
Fig: 3.
Fig: 4.
Fig: 5.
Fig: 6.
Fig: 7.
Fig: 8.

a *true circular* line round the body, he means the spring is to lie in a direction parallel to the plane on which the person stands, and then it will act in a circular line round the body; the falschood of this doctrine has, in fact been proved already, but the dogmatical manner in which this person makes his assertions, renders it proper to shew by direct examination, how little he understands the subject on which he presumes to dictate so imperiously.

The perpendicular lines AA, fig. 7. represent the body standing upright upon the plane B, and the line C, on a parallel with the plane, represents the truss passing in a *true* circular line round the body, according to Mr. T's *notion:* if the body *was so* perpendicular, then the truss *would be* in a true circular line round it; but as the body inclines out of the perpendicular, as marked by the dotted lines, and the truss is kept parallel to the plane on which the person stands, by means of understraps drawn tight and fastened down by new invented double tongued buckles, and such sort of things, it is evident that the back of the truss is DRAWN DOWN BELOW the true circular line of the springs' action, and forcibly kept down by pressure of the understrap between the thighs; and by this means the edge of the spring bears upon the back and must keep the parts in a state of constant uneasiness: the real circular line into which the spring of the truss will naturally throw itself, and remain permanently, with ease, and in many cases without the assistance of any understrap, as has been already mentioned, is indicated by the dotted line E. and every thing advanced by Mr. T. on this subject is absolutely fallacious.

It is to be observed, there are many patients who cannot effectually keep up their ruptures by any of the trusses that have been described; the cause of this may be explained by a very fat person who has a large rupture, and is besides, occasionally called upon to make very violent exertions: the consideration of such a case, too, will enable us to explain the improvement in the general principle of constructing trusses, which will always enable us to treat this case with success, and which may frequently be adopted in other cases of difficulty with great advantage.

Plate 3. fig. 1. represents a horizontal section of the bones of the pelvis, so far as to shew their general form when viewed in that direction. Fig. 2. represents the same bones moderately covered with the muscles, integuments, &c. in a person of moderate size. Fig. 3. represents

sents the same, carrying a large portion of fat, &c. and fig. 4. the same when become extremely corpulent: In all these the pelvis is marked with a firm line, and the circumference of the body is indicated by a dotted line: and on these figures is a dotted line on each side to indicate that part of the pubis over which the rupture passes when it begins to descend out of the abdomen.

I have seldom found a patient who complained of *pain* occasioned by the pressure that was necessary to keep up his rupture, when that pressure was applied in the best manner, viz. by applying his hand to the part: many patients, indeed, when desired to do this, will find it extremely difficult to perform it; they will often find it requires great force to keep a rupture in this manner while they are in an erect position, but when they are able to effect it, it is done *without pain*: the reason for this is obvious; the pressure is produced by means which does not injure the parts, and is made upon the aperture only through which the rupture protrudes, without confining, or otherwise affecting any other part of the body: we are authorised to conclude, from this fact, that the perfect theory upon which we should in keeping up ruptures would be by *direct pressure upon the aperture*, after the rupture has been returned, and without compressing or confining any other part of the body; but as this is evidently impossible by any means but keeping the hand to the part, the most perfect practice will be that which enables us to gain the object in view by direct pressure on the part, with the least possible inconvenience to the surrounding parts.

It has been already shewn that this pressure may be made in a sufficient degree, in many cases, by the simplest kind of spring truss when properly adapted, and in more by that truss where a spring is made to pass all round the body; but in such cases as that described by Fig. 4. even that truss cannot succeed for this reason; Fig. 5 represents the same body with a double truss placed on it, and the pads directly over the apertures through which the ruptures descend: it is clear that the ruptures of such a person cannot be kept up unless the pads of the truss depress the skin, fat, cellular substance, &c. which lies under them so much as to keep the apertures perfectly close, by which means the pads must be brought very near to the pubes: now as this must be effected by contraction of the circular spring round the body, it will be evident on referring to the figure in which the pads of the truss, when near the pubes are

marked

marked with dotted lines, and the spring when correspondingly contracted is marked in the same manner, that the pads cannot be brought so near the pubes as is necessary without depressing the skin, &c. &c. as much in proportion, for almost two-thirds of the circumference of the body: this is a degree of compression that few people can bear at all, that none can bear without great excoriation and perpetual pain in consequence; and even those who have fortitude to bear it, very rarely find their ruptures can be effectually supported. It is for this very strong reason that many persons inclined to corpulence, and advancing in life, get ruptures, small perhaps at first, apply trusses to support them without success, wander from one truss-maker to another, and one quack to a succeeding one, each of whom, perhaps, blames his predecessor, and vaunts his own superiority, though with no better success, till the patient wearied with fruitless trials, sinks into despair and abandons himself to the effects of an increasing disease, which renders him in the close of life a burthen to himself, and perhaps, in some unexpected moment brings him to an untimely end. This cannot be justly charged to the ignorance or misconduct of any particular person, it is because the principle of the instrument is defective, and for that defect the following remedy is offered:

Fig. 6. represents a truss whose circular spring is like the former, but the pads of which are supported by a spring * within itself, whose form and power are such, that when not fastened on the body, its *apparent* thickness or that which is caused by expansion of the spring, shall be, at least, equal to the depth through which the pressure must be made to reach the pubes: Fig. 7. the same truss placed on the body, but not fastened, in this state the pads only touch the body, and the circular spring remains at a distance equal to the height of the pad; but, when the patient is laid on his back, the rupture reduced, the two ends of the circular spring drawn gradually together, and fastened by the straps and buckles or pins provided for that purpose, it will be found, that in proportion as the circular

* It is needless to enter into a minuter description of this part, as several kinds of springs may be used in different cases, with equal success. I have used spiral springs, and springs compounded of different parts; the peculiar kind of spring should be adapted to the peculiar circumstances of each case.

spring is drawn close, the pads will be pressed upon the apertures so as to secure them most effectually, and prevent the descent of the rupture, and when this is effectually done the circular spring will be merely brought into contact with the body as represented by fig. 8; in this state it will remain easy in its situation, without producing any of those inconveniencies that are unavoidable from contraction of the circular spring, in trusses of any other construction.

In mentioning this truss I am not recommending an untried novelty to notice: it is now twenty-two years since I first published an account of it; it was *then* a novelty, and I have used it since with general success: not with a view, however, of proposing it as an universal remedy to supersede every other kind of truss, but as possessing superior power that may be very advantageously adopted in a variety of cases with success.

One of these has been particularly described, and it may be proper to add another, the explanation of which, will perhaps, elucidate the principle on which it may be applied to many others with success.

Taking for our guide that principle which teaches, that as much pressure as possible should be made directly upon the part affected, and as little as possible upon any other part of the body, we shall see that by adopting this method of constructing trusses in those cases where much strength is required, the necessary degree of pressure may be produced with more ease than by the action of a single spring; to explain this, in the most satisfactory way, it may be right to adopt specific terms, it may be proper to state the case in the following way: if a certain degree of power is required to keep up a rupture of a certain size, and that power is applied by the action of a circular spring only, the effect will be produced, but a certain degree of inconvenience will be felt from the action of the spring upon the body; but if the same degree of power is required from a truss which consists of a circular spring, and a spring in the pad, one half at least of that power may be produced by the action of the spring in the pad, therefore the circular spring need be but half as strong as the former, of course its inconveniencies, whatever they may be, will be, in the last case, but half as much as in the former: and this is an object of great consequence in many cases; the only inconvenience, if it should be thought one, is that the pads of the double springed truss must be larger than in the former; this is an objection, however, which I apprehend will have

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but little weight when set in opposition to any solid advantage, at least it gives the patient who has the only right to judge for himself which of the two he would prefer.

As it is presumed enough has been said to demonstrate the truth of that position which it is the intention of these papers to prove, viz. that no one kind of truss can be equally applicable to all sorts of ruptures, and that different kinds of trusses have various advantages, when properly applied to those cases which are adapted for them, it may be proper to proceed to those observations with which it is intended to conclude the whole.

On the Application of a Truss and the Patient's Management of himself.

Those who get ruptures, without knowing what their complaint is, commonly apply to their surgeons for relief, and, in doing this, if they are connected with men of reputation and talents, they will generally gain all the information that will be necessary to guard them against all the dangerous consequences of the disease: and if they have prudence to be satisfied with this information and act uniformly and steadily, according to the advice they have received, they will seldom find any serious inconvenience from the disease, or from the plan it is necessary for them to follow, in order to preserve themselves from it: but, unfortunately, this is not the case with the majority of patients: many, having received proper advice, neglect it, or are seduced by the pretences of empirics to try their nostrums as superior in efficacy to the system adopted in regular practice; many never apply to professional men, but apply, from their own judgment, to any truss-maker they chuse to employ; if they fall thus into the hands of ignorant men, they are not only injured, in the first instance, but by getting false information respecting the disease in general, or their own particular cases, often adopt opinions that prejudice them against the advice of more able men: and many, being filled with apprehensions and prejudices with respect to their own situations, become miserable from the fear of imaginary dangers, form opinions of their own situations and cases, imagine circumstances

which can never exist, and in hopes of obtaining relief, pass their lives in anxiously wandering from one pretender to another, to obtain that assistance which it will be impossible to gain: to such at least, as well as to those who wish to obtain some knowledge of those facts which it becomes every patient to know, that he may be enabled to take proper care of himself, the following observations may not prove unacceptable:

Every rupture, however trifling it may seem to be, is liable to become fatal in a very few hours, if it is neglected, or if effectual means are not employed to reduce it, and keep the parts effectually in their natural situation; those whose ruptures become painful immediately on their first appearance, or in whom symptoms of strangulation supervene, having been admonished by their own feelings of the danger of their situation, when it is past, are in general, very willing to take so much care of themselves as to prevent a return; but those in whom ruptures come on by imperceptible degrees, and who feel no inconvenience for months, perhaps, sometimes for years, are very willing to trust their own experience, and believe that what they may be told of the dangerous consequences of the disease is greatly exaggerated, or perhaps totally destitute of foundation; such persons will not submit to the restraint that is necessary to prevent the increase of the disease, and preserve them from impending danger; their ruptures silently increase, and become irreducible; no caution in avoiding improper exertion is used, till at length symptoms of strangulation come on, and an important operation becomes necessary to preserve them from their fatal consequences: most of the bad ruptures that I have seen have been in patients of this description; the account they have given of themselves has generally been to this effect: "I know not when or how I got my rupture, it was very "small at first and increased by degrees, but as it gave "me no pain I thought it of no consequence; in this way "I went on for a long time till its size became trouble-"some, or till other symptoms occurred that induced me "to seek for advice, and I now find that by neglect I "have fallen into a situation of danger, great part of which "I might have avoided had I sooner taken good advice." The task is undoubtedly difficult, but no time can be better employed than that which is spent in convincing such patients that the slightest rupture should not be neglected; that by early attention every rupture may be kept in a

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state that will prevent every danger, and with very little inconvenience; but, that by not attending to these admonitions, they must, in the end, fall into situations that will become permanently troublesome, and at some period, probably fatal.

It may be said with truth, that every rupture which is reducible may certainly be kept up, by the application of a proper truss: but, as this simple proposition has been frequently misrepresented, and is often misunderstood, it will be very proper to explain it in this place.

Every rupture descends with a force proportioned to its own bulk, and the exertion made by the patient in various situations; after it is reduced it is to be kept in its place by the pressure of a bandage whose power is greater than the whole power exerted by the rupture in descending: when this pressure is applied in the most favourable manner, it is made on the outside of that opening through which the rupture descends; and as no part that is endued with sensibility or irritability can be pressed upon without feeling the pressure, the pressure that is made to keep up every rupture must be felt very sensibly; that feeling must be great in proportion to the size of the rupture and consequent force of the pressure applied; in small ruptures it will be trifling and of course not inconvenient; in larger it must be great, and proportionably inconvenient; in such cases it is necessary to appeal to the patient's judgment to determine him to submit to the requisite pressure, till he is reconciled to the inconvenience, in order to keep up his rupture, as that cannot be done without it: there are few men, whose minds have not been poisoned by quackery, who will not feel the force of this appeal, which is made to their judgement :some, indeed, will not, while others, though very few, may be so circumstanced that they cannot bear any pressure whatever: the first, after every proper attempt has been made to induce them to submit to whatever is necessary, may be abandoned to themselves, the latter are cases that are extremely rare, and when they do occur are just subject o commiseration.

But, besides the pressure which is absolutely necessary in every case, much pressure may be improperly applied, by trusses constructed upon bad principles, by the improper application of trusses made upon good principles, or by the injudicious application of any trusses whatever. All this should be guarded against with the most scrupulous attention, or very unpleasant consequences will frequently ensue.

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All this may at first appear to be so evident, as to render this exposition unnecessary; but whoever should take the trouble to go round among those people who, having no education or knowledge to qualify them for what they pretend to do, would soon perceive the necessity of this explanation, as such people commonly proceed in this way: having got the knack of making some kind of truss, they say, that all trusses, except those which are made by themselves, are good for nothing; that *their* trusses are applicable to all cases, will keep all ruptures with certainty, and are *so easy*, that they may be worn in all cases without the least inconvenience. The absurdity of such pretences may be diverting, but the *mischief* they occasion is by inducing patients to form false opinions on the subject, which it will afterwards be very difficult to eradicate from their minds.

Every patient should be apprised, that no truss can be properly constructed, adapted, and applied to any case, except by those who are acquainted with the structure of the parts, the nature of the disease, and the mechanical principles and action, as well as power of the instrument to be applied; mere workmen, though useful as labourers in the hands of such men, are, of themselves, incapable of any thing but labouring as workmen; if they attempt more, they generally do mischief; and, indeed, there is much mischief done by persons of this description, who venture to apply trusses to such patients as are willing to put themselves in their hands.

It behoves every patient to ascertain, by the best means in his power, the capacity of the person he means to employ, and, when he does employ, to place implicit confidence in him: he may be assured, that practical men always acquire, by experience, some information which cannot be obtained in any other way; and no one can obtain the full benefit of that information, unless he disposes himself to follow implicitly the advice that may be given him, at least, till he finds it is less beneficial than he is led to expect. The patient who should argue with his physician upon the properties and effect of every medicine he is advised to take, would seldom do justice either to his doctor or himself; and the patient who has a rupture, and will follow no advice but that which is exactly fitted to his own inclination, will commonly find himself in the same situation. Much may be said upon the manner of fitting a truss to a patient, much *has* been said by some late writers

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on this subject; but certainly with no good effect, if with any good intention. The fact is, that every rupture should have a truss constructed, adapted and applied to its own particular circumstances: to do this is an act of personal skill, the effects of which will be felt, but cannot be understood or imitated by any kind of description; every attempt to do this, is, therefore, at best, but the affectation of doing something, when, in fact, nothing useful is done.

Every patient should, when it is possible, have personal interviews with those who are to construct and apply his truss, as many circumstances that are of importance to the well fitting of a truss, may be seen, in a moment, that cannot be understood from any information or description; the want of such interviews will, therefore, be productive of serious inconvenience to the patient, as well as to the person he employs. It would be needless to make this observation, if many patients did not, from motives of false delicacy, obtain trusses by pretending to purchase them for distant friends. With such imperfect information as they can gain with trusses obtained in this manner, they think they are competent to apply them to themselves; they fail in the attempt, and, after suffering many inconveniencies, at last are obliged to seek that information, which, if obtained at first, would have saved them much unnecessary pain and trouble.

When a patient first begins to wear trusses, he should obtain the best information in his power as to the mode of reducing his rupture and applying the truss; in this he should make himself perfect, as it is an operation he will frequently have to perform for himself. It is, indeed, understood that the truss should continually keep up the rupture, but if the patient takes off his truss on going to bed, he should be able to put it on *properly* on rising in the morning: his rupture may descend while his truss is off, and he should, therefore, be able to reduce his rupture perfectly, and apply his truss properly whenever this happens. This information, like every other that is connected with the subject, will be best obtained on a personal explanation; every other will be imperfect, but as there are situations where personal information cannot be obtained, the following imperfect attempts to supply the deficiency may not prove unacceptable.

A patient will, most easily, reduce his rupture while lying on his back, with his knees raised so as to relax the muscles which are connected with the abdomen as much as possible,

possible; then raising the rupture, and separating it from the testicle, if it is a scrotal hernia, and pressing it gently upwards in the direction the spermatic vessels descend from the abdomen, he will gradually return the whole into the cavity, and keep one hand on the aperture till the truss is applied, which will be done best while he is lying down: if his truss be constructed on good principles, and properly adapted to his case, It should be so applied, that the lower edge of the pad be parallel to the upper edge of the os pubis, by which means the rupture will be effectually kept up, and no improper pressure made on the spermatic vessels; any other method of applying the truss must be improper. If it is placed higher than the situation I have described, the rupture will descend under the truss, and the patient be injured by the pad pressing on it; if it is placed lower, the spermatic vessels will be injured by the pressure, and, even with this additional inconvenience, the rupture will seldom be properly kept up.

It is peculiarly necessary to impress this on the patient's mind, as some of the quacks of the present day recommend a very different system: according to them, the *action* of the truss is to be nothing, and the patient is to depend upon girding it on tight, and buckling it down fast with double-tongued buckles and never-failing straps, and various projects that are equally rational. On the principles on which trusses should be constructed, enough has been said in a different part of this work; and it is presumed, that a little reflection will convince those who are unprejudiced on the subject, that the mode here recommended is best adapted to be made a general rule. To assist them in forming a judgment, we give a brief explanation of the figures in the following plate.

Plate 4. figure 1. is intended to convey an idea of the os pubis and bones connected with it, when viewed in front: on one side a dotted line describes the course in which the rupture descends, in its progress from the cavity of the abdomen into the scrotum; on the other, the pad of the truss is put upon the pubis, to shew the manner in which it should be fixed. Figure 2. shews the pad placed upon a body of corresponding form, and the os pubis is marked with dotted lines. It is hoped that these sketches will enable those who are not acquainted with the anatomy of the parts, to comprehend how the pad of the truss should be placed. If it is put so far above the pubis as to allow

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Fig. 1.

Fig. 2.

any thing to pass between that bone and itself, the rupture will descend; if so low as to press directly upon the os pubis, the spermatic vessels must be forcibly compressed, which is always painful, and will sometimes occasion the testicle to swell; but if it is put so that the lower edge of the pad is quite even with the upper edge of the pubis, the aperture will be completely closed; and if the truss is, in other respects, properly adapted to the wearer, the rupture will not descend.

It is not uncommon for those who apply trusses, to make patients, immediately on putting on a truss, strain, cough, jump, and play many other antick tricks, to see if they can force their ruptures down. This practice, surely, cannot be too severely reprobated. It is true, that every patient should have a truss that will enable him to go through his accustomed exercise, whatever that may be, and even make any exertion he may be called upon for, *without suffering his rupture to get down*; but as every man is not to be a merry Andrew, it is surely absurd to make every patient play merry Andrew's tricks. Mr. Timbrell and his washer-woman may cast their somersets as they please: his object was to get a gold medal, her's to serve her master; and, on such occasions, a little absurdity may surely be allowed; but, to those who soberly wish to guard themselves from the consequences of this insidious and dangerous disease, a different practice should most undoubtedly be recommended.

It is known that a rupture, which has frequently descended without producing any bad effects, and been easily reduced, has *suddenly* descended and could not be returned without the operation; when this happens accidentally, it is a misfortune that could not be avoided; but who, that is in his senses, would bring it on himself by endeavouring to force his rupture down? yet this is a consequence that may frequently be expected to follow from the common practice of trying if a rupture can be forced down after the truss is put on; if the pressure from the truss is not sufficient, or if it is not directed to the proper part, the rupture will certainly be forced down, and the consequences that have been pointed out may, very probably take place: If so much pressure be applied as will at once keep up a rupture which had not previously been supported, in most cases a truss much stronger than is necessary will frequently be applied, and then the patient's permanent

ease and comfort will be diminished, if those mischiefs, which are the consequence of improper pressure be not produced; it is a fact, that when a rupture has been neglected, it will at first be difficult to keep it in its place: * but by attention, perseverance and due care, the tendency to descend will diminish in a few days so much, that a truss, which at first seems not to be sufficient to keep up the rupture, will afterwards do so under every circumstance in which the exertion of the patient's labour or exercise may place him. After examining all these circumstances, the most rational plan seems to be to construct, adapt and apply to every case, such a truss as appears likely to answer every purpose, then to direct the patient to avoid much exercise and violent exertions for several days, till he has accustomed himself to bear the full pressure of the bandage without inconvenience, and is able to manage it perfectly by himself: he may then engage in his usual exertions, and even make any exertion he may think proper in perfect safety.

Having obtained trusses that are perfectly adapted to his case, and learned how to apply them with propriety, the patient is likewise to be informed how to guard himself against some inconveniencies, which, at times, may fall upon every person who wears a truss, but are peculiarly apt to attack those who have bad ruptures at the time they first begin to apply trusses, or such as are peculiarly liable to be

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* A case which strongly exemplifies this fact came under my observation some time ago. A gentleman had a troublesome scrotal hernia, and incipient ascires besides: this rendered it very difficult to keep up his rupture, and indeed he had quite neglected it, but his surgeon having convinced him of the danger he incurred, induced him to apply to me. I found it extremely difficult to adapt trusses to his peculiar situation, and when this was done, the patient was not able to take proper care of himself; when his rupture got down he knew not how to reduce it, so that he was continually sending for his surgeon or me; at length he was ordered into the country for the benefit of his health, here he could have no assistance with respect to his rupture, and was forced to depend upon his own exertions, the consequence was, that on his return to town he had regained his health, his rupture gave him no trouble, and he wore with ease those trusses, which, before he went into the country, seldom kept it upon him more than half a day at a time.

This patient's trusses were certainly not altered; the change in their effect may be justly attributed in part to the change in the patient's health, partly to the power he acquired of applying them properly, and in part to the diminution of that tendency the rupture had to descend in consequence of its being so long neglected.

be affected by friction on the skin, or by the effects of even slight pressure. It is presumed that the effects of improper pressure are guarded against in the construction of the truss, both with respect to its form, the action of the spring, and the manner of constructing the pad; but as various opinions are afloat upon this subject, it may not be improper to attempt, at least, to reduce them to a rational system.

As the common venders of trusses act upon a manufacturing principle, or rather as mere workmen, who follow a pattern they chance to get, without understanding the meaning or use of what they do, most of them have some regular plan which they apply to all cases, and are ready enough to say, that their plan is the best; but the truth is, that in this, as well as in every other particular, each case will require that its bandages shall be adapted to its own peculiar circumstances, and a number of cases may each have bandages that differ materially from each other, though every one may be properly adapted to that for which it is intended. If any thing like a general system can be adopted it will be regulated, in part, at least, by something like the following considerations, viz. That as the rupture, in every case, descends through an aperture of a given size, the pad should be larger than is necessary to cover that aperture, and its basis so firm, that the rupture acting continually upon it shall not materially alter its form: and that this firm part should be so soft as not to injure the soft and irritable parts it must necessarily act upon: referring all this to the *construction* of trusses, it must be observed, that if a person who has not been accustomed to wear a truss should get one ever so well adapted to his case, if his skin is tender, particularly in hot weather, or on taking violent exercise, the friction of the truss will irritate the skin, and produce excoriation: the reason for this, as well as the proper remedy may be thus explained: when the skin gets moist by perspiration the pad of the truss becomes damp and sticks to it, the motion of the body makes the truss move about, and of course the skin is fretted: if any thing, such as a piece of fine linen several times doubled, be interposed between the truss and the body, it absorbs the moisture on one side, and receives the friction of the truss on the other, and by this means the parts which lie under the truss are kept cool and easy instead of being irritated and painful.

If the pad of the truss has been originally too hard, or if it is grown by age so hard as to be painful, instead of a few folds of linen, a cushion, consisting of many folds of linen, cotton, fine flannel, or any other soft material may be introduced under it, so as to give that degree of softness which may be desired: this is so obvious, that it has suggested itself to thousands who have felt the abovementioned inconveniencies, without any other information: yet one person has been so foolish as to assert, in the most public manner, that *he has invented this practice*, and to complete the measure of his absurdity, he confesses, that he received the hint, or idea as he calls it, from another.

Sea bathing, or the cold bath, may often be found useful, but when either is improper, the use of cold water, applied to the part with a sponge, should not be dispensed with: this is not only pleasant, as conducing to cleanliness, but it will have a good effect, as tending to brace the parts affected, and so far increase the probability of effecting a radical cure.

It is now proper to recapitulate that a rupture is not necessarily a dangerous disease; at whatever period a patient gets a rupture, it is in his own power to prevent it from getting worse or affecting his health; but if he neglects it, it may always prove fatal in a very few hours, or, if it does not, it will certainly increase as he advances in life, and at last get into a state that will effectually render him unfit for bodily exertion, and thus leave him a prey to anxiety, and the dread of danger, which will be perpetually impending, and beyond the power of human art to avert.

It is particularly necessary to impress the conviction of these truths on the minds of females, and others who are advancing in life; and who, first from unwillingness to obtain proper advice, and afterwards from unwillingness to adopt what must occasion them some trouble to reconcile themselves to, are prone to neglect themselves till they are past that state in which they can be essentially relieved; as the worst, and from those causes the most unmanageable ruptures are to be found among persons of that class, it may not be useless to subjoin the following cases for their information:

A lady, in the early part of her life got a small crural hernia, she procured a proper bandage, which she wore without any inconvenience for some years: at last she became weary of her bandage, and laid it aside; her rupture gave

gave her no trouble, she, therefore, took no notice of it, though it went on gradually increasing; and, as she declined in life, it attained to a very great size.

When an event happened which alarmed many ruptured patients, this lady likewise took the alarm, applied the old bandage which she had kept by her, but finding it was useless, by the advice of her surgeon she sent for me; she produced the old truss, informed me *how easy*, *how pleasant*, it had been, and expected that I should make her one *as easy* and *as pleasant* to suit the present state of her case. It was in vain to represent that her rupture was now more than twenty times as large as at first, and that of course the truss to be applied must be proportionably strong, which would occasion more restraint, though it would produce no unpleasant consequences; her commands were absolute, and the gentleman who introduced me wished that I should *try*, at least, to please her: I did so, produced trusses that were *as* easy as she could wish, *but they* did not keep up her rupture. I then applied a truss that *did* keep it up compleatly, without any untoward circumstance, except the restraint that was indispensably necessary: this she *would not* bear, said she had rather abide by all the consequences of the disease rather than wear any truss, and has determined to avoid every exertion that it is in her power to avoid, that she may not increase her rupture, and leave the rest to chance.

Had this lady paid due attention to the advice that was given her at the commencement of the disease, she might, by wearing such bandages as were no inconvenience to her, have preserved herself from every ill consequence of the disease during her life: but she felt nothing, therefore believed nothing was to be felt, and would not even use a precaution that could be but little trouble, to reserve herself from possible inconveniencies in future: those inconveniencies did fall on her; she felt, and wished to avoid them; but want of resolution, or at least false reasoning upon the subject still pursued her, and she resolves to suffer all the consequences of the disease, rather than a trifling inconvenience which a different mode of reasoning might have convinced her would soon be no inconvenience at all. Her rupture may not prove fatal, but it requires little penetration to foresee, that in order to prevent it from becoming so she relinquishes all the advantages that she might have derived from exercise in prolonging the term of health, and, by this means is accelerating the period of decripid old age.

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A gentleman got a double rupture at an early period in life; by the advice of his surgeon he obtained trusses from the most eminent persons at that time in town; they answered his purpose extremely well, and he felt no inconvenience from them or from his rupture.

As he advanced in life he grew corpulent; and the trusses made for him by the same person he had always employed were uneasy and ineffectual; he applied to others with no better success. He resided several years in Ireland, but could get no relief, and continued to increase in size, his ruptures likewise enlarged so much that he was incapable of taking any active exercise, and thus sunk into a bad state of health, bodily as well as mental, by reflecting on the principal cause of his decline. In this case there was no neglect to be attributed to the patient, or to those under whose care he placed himself: although the trusses he used were constructed in the best manner that was known at that time, and answered every useful purpose that could be descried for many years, the defective principles on which they were constructed, rendered it impossible that by any exertion of his own or of others, they should keep up his ruptures after the very great alteration in his size: (the reason for this has been explained in another place,) by this circumstance only was he obliged to relinquish the use of trusses, and sink, as he thought, immediately into a state of ill health, and increasing disease; the loss of a relation by the same complaint roused him from his lethargy, he came to London with a determination to get assistance if it was possible; he applied to the late Mr. Rush, and by him was recommended to me.

He was at this time so fat that his belly projected forwards so that the apperture in the abdominal muscles was perpendicular when he was standing, instead of being in an oblique direction, and this was one reason why any truss that acted by contraction in a circular direction could not keep up his rupture; another was, that the great quantity of fat, &c. lying between the abdominal muscles and the integuments, rendered it impossible for any truss made upon the common principles to keep up his ruptures, which, together were equal in bulk to the size of a man's head: many attempts were made without success; but the steady perseverance of the patient, and the attention of Mr. Rush stimulated my exertions, till at last I succeeded in adapting trusses that effectually keep up his ruptures. At first he was teized with excoriations from the pressure of the pads

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of the truss, but these were overcome by proper applications, and the parts soon becoming accustomed to the action, have never since been liable to the same accident: he never takes off his truss except for the purposes of cleanliness, and as his age and unwieldiness incapacitate him from doing this himself, it is done by me when he is in town, and by some medical gentleman when he is in a different situation: his ruptures never come down, he feels nothing that he thinks inconvenient, he takes every exercise that is consistent with his age and situation, and enjoys the best state of health that can be expected at his time of life; in this state he has now continued more than two years.

This is undoubtedly the worst case I have had, in which I could boast of complete success; every circumstance of the disease was unfavourable, but there was no caprice or frowardness on the part of the patient, *he* was willing to submit to every thing that could possibly be tried for his relief, and *therefore*, we at length succeeded in relieving him effectually. In the following case, where the leading circumstances were very similar, but the conduct of the patient extremely different, the consequences have been such as might be expected from that conduct:

Soon after the gentleman, whose case I have just related, came under my care, I was applied to by a butcher, who was equal in height and bulk, whose ruptures were as bad, but who was not so far advanced in life: this man had had his ruptures for several years, had wandered from one empirical truss-maker to another, each of them had told him that his ruptures might certainly be kept up by *their* trusses which were so easy that he would scarcely be sensible of any restraint or uneasiness; as each of them had failed of performing his promise, the patient was convinced that *they* were unable to perform it, but was convinced that some other might do that which they were unable to perform.

As a previous step, I thought it necessary to convince him that ruptures so large, existing in a man so corpulent, and who was perpetually called upon to make violent exertions, could not be kept up without the application of considerable force, and this could not be applied without being felt. I ventured to promise, however, that his ruptures might be properly kept up, and when he had gradually accustomed himself to the pressure of his truss, any inconvenience he might feel, on that score, would be over-

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balanced by the comfort of retaining his ruptures within the abdomen, and the consciousness of being free from any danger from the disease: with this he expressed himself satisfied, and promised to conform to the plan recommended. With the experience of the former case, fresh in my memory, I felt the propriety of applying the same kind of truss to this patient; it was done, and promised to be equally successful: but the patient would not give it a full trial, he found the pressure was uneasy, he was told by his friends that trusses might be worn without inconvenience, and since he had, unfortunately, not been able to find such a truss, he resolved to go without any, and abide by the consequences. At no very distant period his ruptures came down with the most serious symptoms of strangulation. He applied to an eminent surgeon who luckily reduced it and obviated all the unpleasant symptoms that had occurred; he then advised the application of a truss, and the truss I had recommended was produced; this gentleman had never seen such a bandage before, certainly did not comprehend the principles upon which it was constructed, and, instead of attempting to investigate them, pronounced, most dogmatically, that it was not proper to be used, and directed a message, most peremptorily to me, to desire that I would make a truss in the common manner, which in HIS opinion would answer every useful purpose: this message was conveyed by the patient's wife, and probably not much *refined* in the carriage; but as I was unwilling to seem captious, I complied with the request, prepared such a truss as he desired, which, as I foresaw, proved ineffectual: I was not willing to have any farther trouble, declined to make any more fruitless attempts, and the patient remains to this time without any truss, willingly exposed to strangulation and all its consequences.

The resemblance of the leading circumstances of the disease in these two cases, and the difference of the event in consequence of the different conduct of the patients, afford the strongest proof that can be given of the effect of rational attention and irrational neglect: the gentleman, from the first paid proper attention to his complaint, and when circumstances, which he could not command, occasioned such alterations as rendered the best assistance he could obtained ineffectual, he very unwillingly submitted to his fate: when a fresh prospect of relief appeared, he again attempted to obtain it, chearfully submitted to every

attempt

attempt, till in the end he obtained permanent relief that has placed him in a state of security and comfort. While the butcher, instead of adopting the same line of conduct, indulged expectations that could not be realized, refused the relief that was within his reach, because it could not be had without a little trouble to himself, and therefore sat down in a state that keeps him in continual danger of sacrificing his life to his imprudence.

It has, perhaps, been satisfactorily proved, that relief will always be most effectually obtained in these cases by personal application; but as many are so situate that they cannot do this, they can only obtain trusses by having them sent to a distance: in order to insure success, as much as it can be insured under these circumstances, they should send the proper measure of the patient, and the best information that can be obtained of particulars of the case, to the following effect:

The measure should be taken directly round the body upon the part where the rupture lies; *i. e.* if it is in the groin, the measure should be taken directly round the body where the thighs join to the pelvis; and not round the smallest part of the body, which is commonly called the waist; if the rupture is in the navel the measure should be taken directly round at that part: it should be mentioned whether the patient is tall and thin, or short and fat, for a tall thin man may measure the same number of inches as a short fat one, and the form of their bodies be essentially different from each other, so that a truss which is proper for one would be highly improper for the other.

It should be told whether he is subjected to great bodily exertions, whether from exercise or labour; whether his ruptures are large, and what are their contents, when that can be ascertained; and likewise whether he has a double rupture, or only on one side, and on which side that is.

In consequence of such information trusses are very frequently sent to patients at a distance, and often with success, but when they do not succeed the patient's last and only resource is in personal application.

On the radical Cure of Ruptures.

When this work was planned, it was not thought necessary to say much on the radical cure of ruptures; because, almost half a century has elapsed since so much light was thrown on the subject by the writings of Mr. Pott, that all professional men, who have either intelligence or integrity, have relinquished the attempt, knowing it to be absolutely impracticable. The quacks, as it was always a favourite system of fraud with them, pretended to perform this cure for some time longer; but even they have abandoned it, and many years have elapsed since any one was known to be hardy enough to say he would undertake to cure this disease. Under these circumstances, in writing such a treatise as this, it was sufficient to say, that the radical cure of ruptures was attempted in the infancy of surgery; but that, on more correct investigation, it had been universally abandoned as impracticable. Since the greatest part of these papers were printed, however, something has happened, which shews that this subject is still entitled to mature consideration.

In the London Medical Journal for February, 1803, appeared a paper, called, "Some Considerations to shew "that the *Idea* of effecting a Cure of the Bubonocele "ought not to be entirely abandoned." This paper is signed with the initials S. C.

In the notice to correspondents, in the next number, "The editors request the author of the proposal for a "radical cure of bubonocele, signed S. C., and printed in "our last number, p. 161, to transmit his name; otherwise, they shall be under the necessity of giving the "priority of *that proposal* to Mr. Carlisle, who publicly "signified his intention to perform *such an operation*, at "the weekly consultation of the Westminster Hospital, "seven weeks before the receipt of S. C.'s letter."

Should it eventually prove that S. C. and Mr. Carlisle are the same person, there is at least one, but should it prove that they are two distinct persons, then there will be two gentlemen whose opinions are entitled to some notice, and who think that all the eminent men, who have practised surgery for the last fifty years, during which period this art has arrived much nearer perfection than it had ever done before, were mistaken in their opinions, and wrong in their practice in the treatment of a very common disease, that was

was very important to the patient, and had obtained a great portion of professional attention. We certainly ought to pause before such an opinion should be entertained, and very seriously examine any arguments that may be brought forward in support of it; and such an examination will be attempted on the present occasion.

Having thought it necessary to quote the notice in the Medical Journal, in which Mr. Carlisle's name is mentioned, it is likewise necessary to add, that I have not the least knowledge of HIS operation. It does not seem to have been as yet performed, possibly it never may be; at all events, when it is, its merits will be known, and it must not be understood that there is any intention to question the merits of Mr. Carlisle's project in this discussion, which is strictly an examination of the proposition made public by the writer who calls himself S. C.

That writer's assertions are: that, 1st, "Mr. Pott, or "any other writer, has not adduced objections sufficiently "forcible to shew, that what is termed the royal stitch "ought to be for ever abandoned." 2dly, That the profession has, "*perhaps* without good reason, suffered "that operation to fall into entire disrepute;" and 3dly, "that it is deserving much more consideration than "modern practitioners seem to have bestowed upon it, and "is by no means so incapable of being improved, but "that it may thereby be rendered likely, under certain "circumstances, to prove both safe and efficacious."

It would be absurd in me to attempt a vindication of Mr. Pott; but as this question is to be again agitated, and his opinions certainly have had much weight, it will be proper to introduce them here, as well to let them have what attention they really deserve, as to introduce them to the notice of those who may not be inclined to search for them in the body of his work.

*Attempts towards a radical Cure.**

"In the first section of this treatise I have said, that the means used to obtain both a palliative and a radical cure were exactly the same, and the event was dependent on many circumstances which a surgeon could neither direct

* Pott's Treatise on Ruptures, p. 156.

nor alter; such as the age of the patient, the date of the rupture, the thickness of the hernial sac, the size of the abdominal opening, &c.

"They who are unacquainted with the true nature of this disease, may possibly be surprised at this assertion, and be thereby induced to believe, what has in all times been so confidently asserted, viz. that there are methods and medicines whereby the disease may always be perfectly cured; and that the surgeons, either through indolence will not get information of them, or through obstinacy will not practise them. If either of these charges was true, it must be the latter, for we certainly do know what attempts of this kind have been made; and if any of these means had really deserved the character which has been given of them, had been safely practicable, or had proved generally successful, I should certainly have spoken of them in their proper place: but this is so far from being the case, that, on the contrary, however they may have been applauded by a few individuals, they have, upon repeated experiment, been found unfit for general practice, being either totally inefficacious or painfully mischievous. The majority, nay, almost all they who have submitted to, or tried them, have remained uncured of their disease, or have been mutilated or murdered in the attempt.

"Several of these methods have indeed the sanction of antiquity, and have been described, and even practised, by many of the old surgeons. The principal of these, or they which are most worthy of notice, are, the cure by cautery; the cure by caustic; that by castration; the punctum aureum; the royal stitch; and the cure by incision.

"In Avicenna, Albucasis, Paulus Ægineta, Fab. ab Aquapendente, Guido de Cauliaco, Severinus, Theodoric, Rolandus, Sergeant Wiseman, and others, will be found the cure by cautery, which is performed as follows:

"After a proper time spent in fasting and purging, the patient must be put into an erect posture, and by coughing, or sneezing, is to make the intestine project in the groin as much as possible, when the place and circumference of such projection is to be marked out with ink: then the patient being laid on his back, the intestine is to be returned fairly into the belly, and a red hot caustic is to be applied according to the extent of the marked line. For this purpose, cauteries of different sizes, shapes, and figures, have been devised; annular, elliptical, circular, like the Greek letter, gamma, &c. The writers who have given an account

account of this operation, have differed a good deal from each other, not only in the size and figure of the cautery, but in the depth of its effects. Some have directed it to be repeated, so as to denude the os pubis; others direct that the skin only be destroyed by the iron; the cellular membrane, sac, periosteum, &c. with repeated escharotic applications; but in all of them the exfoliation* of the bone is made a necessary part of the process. The eschar and sloughs being separated, and the exfoliation cast off, the patient is ordered to observe an extremely strict regimen, to lie on his back during the cure, and to wear a bandage for some time after, in order to prevent a new descent of the parts, which, notwithstanding all the pain and all the hazard the patient had undergone, he was still liable to.

"The cure by caustic seems to have succeeded to that by cautery, and is described by most of the same writers; by Guido, Severinus, Lanfranc, Pary, Theodoric, Scultetus, &c.

"The patient being laid on his back, and the parts returned into the belly, a piece of caustic is to be applied on the skin, covering the opening in the abdominal tendon, so large as to produce an eschar, about the size of half a crown. Some suffer this eschar to separate, others divide it, and then by the repeated applications of escharotics, destroy the membrana cellularis, with as much of the hernial sac as can be done without injuring the spermatic vessels. For this purpose, different kinds of corrosive applications have been made use of: pastes loaded with sublimate or arsenic; the stirpes brassicæ, burnt; the tithymalus; lapis infernalis alone, or with suet and opium; oil of vitriol; with many others, according to the humour of the operator. But though the means are somewhat different from each other, the end or intention in the use of them all is the same, viz. to remove or destroy the skin and cellular membrane covering the tumour, together with a part of the hernial sac, and by that means to procure such an incarnation, as by its firmness, and its attachment to

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* Albucasis says, "Et scias quod quando tu non consequeris os "cum cauterio, non confert operatio tua."

Rolandus orders the cautery to be used in the same manner; so do Guido, Theodoric, &c. Brunus says, "Si non fuerit os consecutum, in "primâ vice, tunc itera cauterium vice aliâ donec consequeris; quia si "non consecutum fuerit os cum cauterio, parum confert operatio tua."

to the bones and parts adjacent, shall prevent a new descent of either gut or caul.

" The mere relation of one of these methods is sufficient to shock any humane or ingenuous man. The horror attending the use of the cautery must be great, to say nothing of the extreme uncertainty of the size or depth of the eschar; the apprehension from the caustic will be less, indeed, but the pain must be nearly as great, and of much longer duration.

" The parts to be destroyed are, as I have just said, the skin, the membrana adiposa, part of the hernial sac, and the periosteum covering the os pubis; and this is to be accomplished without injuring the spermatic vessels, or the tendon of the abdominal muscle.

" If the spermatic vessels are hurt, an inflamed or diseased testicle will be the consequence; if they are destroyed, the testicle will become useless. If the tendon of the oblique muscle be injured, either by the iron or by the caustic, terrible sloughs, a large ill-conditioned sore, and a brisk symptomatic fever must be expected, which in some habits must be productive of considerable mischief: and that considerable mischief was often done by these processes, may be learned from the very writers who describe them*.

If

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* Guido, speaking of the cure by caustic, says, " In quo summe " cavendum est, quod dominus sit de corrosivo; si enim indocte appli- " cator, febrim commovet, & accidentia mala." That great pain, defluxion on the hæmorrhoidal vessels, and inflammation and swelling of the scrotum, were often the consequence of these attempts, may be learned from the same author, who, speaking of the method of applying the caustic, says, " Et ita continue fiat quousque caro miracis tota s't " corrupta, usque ad Didimum, quod cognoscitur per inflationem bursæ, " testiculorum;" and that the caustic has gone deep enough, he gives the following proof: " Quod cognoscetur per majorem tumorem testiculi & " per majorem dolorem dorsi & partium posteriorum." Brunus says, " Et cave summâ diligentiâ, ne in horâ cauterizationis exeat intestinum, " & comburatur." Lanfranc, speaking of the ill effect of the caustic in some habits, says, " Et sic multi spasmantur, & spasmati subito " moriuntar." Fab. ab Aquapendente says, " Quæ tamen chirurgiæ " uti videtis, difficilis admodum sunt, & inter subtilissimas haberi " possunt; quo sit ut plerique patientes affectus perpetuo gestare " quam his chirurgis submittere se vellent;" and, in another place, " Quæ porro chirurgiæ vehementem dolorem afferunt & satis difficilis " sunt." In short, whoever will take the trouble of reading the old writers on this subject, will, even from their own account, be satisfied, both of the pain, hazard, and inefficacy of all these methods.

" If the os pubis be laid bare, whether by cautery or by caustic, some of the before-mentioned hazard must be incurred; if it be not, the intention will in general be frustrated; that is, the intestine will slip down behind the scar, and put the patient under the same necessity of wearing a bandage, as he lay under before he submitted to so painful and so hazardous an experiment.

" If the preservation of life was the object of these means, something might be said in their vindication; the anceps remedium must for ever be preferable to desperation. But that is not the case; they are recommended to be put in practice when the patient's life is in no kind of danger, and are designed merely to save him the trouble of wearing a truss, which purpose they can seldom answer; for it is well known, that after the use of the cautery, caustic, and every method, either proposed for a radical cure, or used to rescue a ruptured patient from death, that the intestine will slip down behind the cicatrix, and form a new bubonocele, which can only be kept up by a proper bandage.

" The three other means made use of by the ancients towards obtaining a radical cure, were the punctum aureum, the royal stitch, and castration.

" The punctum aureum was performed as follows: The intestines being emptied by purging, and the hernia reduced, an incision was made through the skin and membrana adiposa, down to the spermatic process. This incision was to be of such length, as to permit the operator, either with his finger or with a hook, to take up the said process, and to pass a golden wire under it, which wire was to be twisted in such a manner as to prevent the intestine from slipping down again into the hernial sac, but not so tight as to intercept or obstruct the circulation of the bloood to the testicle. Some operators preferred a leaden wire to a golden one, and others a silken ligature.

" It may possibly seem rather uncivil to say, that both this and the succeeding operation were directed and practised by people who were very little acquainted with the true nature and structure of the parts they operated upon, or indeed of the disease for which they prescribed such operation; but had not that been the case, they never could have proposed so fallacious and uncertain a method of treating it; for if the wire, or whatever was passed round the process, did not bind pretty tight, it would not prevent a descent of the gut, and the whole, though painful and irksome, must become absolutely useless; if it bind

bind tight, it must necessarily retard and obstruct the circulation of the blood through the spermatic vessels, and produce a disease of them and of the testicle*.

" The royal stitch was performed in this manner: The intestines being emptied, and the portion which had descended being replaced, an incision was made in such manner as to lay bare the spermatic chord, about two inches in length from the abdominal opening downward. When the process was freed from the cellular membrane, it was to be held up by an assistant, while the surgeon, with a needle and ligature, made a continued suture from the lower part of the incision to the upper, in such a manner as to unite the divided lips of the wound again, comprehending the cellular membrane, and thereby endeavouring to straighten the passage, as they called it, from the belly into the scrotum, without injuring the spermatic vessels.

" The operation is described by many of the old writers†, with some small variation from each other, both in the manner and the instruments; but all tending to the same end, and all proving, that their idea of the disease, and of the parts affected by it, were erroneous and imperfect. The fatigue to the patient must be greater in this than in the preceding operation, both on account of the large incision, and of the suture. In some habits either of them must be very hazardous, and, in the majority of cases, painful, troublesome, and tedious; which circumstances might nevertheless be submitted to, if the cure was certain, the contrary to which did most frequently happen, even by the confession of the very writers who propose and describe these methods, and who universally order the long wearing a truss after such operations have been submitted to.

" Some who thought the stitch added unnecessarily to the pain, have directed the incision to be made in the same manner as for the suture; but instead of sewing the lips together, have advised that the common membrane be dissected out pretty clean, and the sore digested and incarned. This is so like to the operation for the incarcerated

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* Whoever would know the particular methods of executing this operation, may find them in Guido, Parey, Franco, Scultetus, Smaltzius, Permannus, Nuck, &c.

† Paulus, Albucasis, Fab. ab Aquapendente, Guido, Rolandus, Parey, Serjeant Wiseman, &c. &c. &c.

rated bubonocele, both in the manner of making the incision, and in its consequence, as tending toward a radical cure, that it may be looked upon as really the same thing; and how very fallacious and uncertain that operation proves towards answering this end is too well known.

"Both these, the royal stitch and the punctum aureum, proved often destructive to the testicle, even in the most judicious hands, and when it got into those of ignorant pretenders it proved most frequently so; for not knowing how to perform properly what they had undertaken, and finding it much more easy, after the incision was made, to slip out the testicle, they most commonly did so.

"These are the principal methods proposed or practised by our forefathers for a radical cure of a rupture; among the writers indeed will be found some trifling variations from each other in the execution of them, but the intention and aim is the same in all, *viz.* to prevent a new descent of either gut or caul, by producing a union of the parts, through which they either did or were supposed to pass. According to the degree of anatomical knowledge, and humanity of the proposer, they will be found to be more or less rational and gentle; but are all of them painful, hazardous, and most frequently fallacious, and have therefore been totally disused by all modern practitioners, who have either knowledge, compassion, or honesty.

"No disease has ever furnished such a constant succession of quacks as ruptures have; they who have had some smattering of anatomy or surgery, and whose humanity has not been their prevailing quality, have adopted one of the preceding operations, or something like them; while they who have had less knowledge and more timidity, have had recourse to the more sneaking knavery of specific applications.

"The histories of Prior Cabriere, Bowles, Sir Thomas Renton, Dr. Little John, &c. &c. &c. to be found in Dionis, Houston, and other writers, will furnish, to the reader, an idea of the practice and performances of some of those who stood at the head of those bold promisers; and our present newspapers daily supply us with a number of the lesser dealers in specific medicines and new invented bandages, by which the poor and credulous are gulled out of what little money they can spare. Operative quackery is not indeed so frequent, or so readily submitted to; but I wish I could not say, that more than one life has not been destroyed in our own time, by attempts to form and sup-

port the character of an operator in this disease: to this kind of hazard indeed, the poor are luckily not so liable, as it can only be worth the while of these rupture-doctors to murder those who have before hand been simple enough to pay them well for it.

"This is a subject in which mankind are much interested, and on which a good deal might be said; but as an honest attempt to save the afflicted from the hands of those who have no character to lose, and whose only point is money, might, from one of the profession, be misconstrued into malevolence and craft; I will not enter into it, but shall conclude by wishing, that they who have capacity to judge of these matters, (which are as much the objects of common sense as any other kind of knowledge) would not suffer themselves to be deluded by the impudent assertions of any charlatan whatever, but determine in this as they do in many other things, that is, by the event. In short if they who have so much credulity as to believe these lying impostors, would only defer the payment of them till they had compleated their promises, the fallacy would soon be at an end."

Such were the opinions of Mr. Pott; on which I shall only remark, that he did not produce them as a set of dogmas to which he demanded implicit obedience; but, he had investigated the subject fully, and published the treatise as the result of his investigation, virtually expecting that every intelligent and honourable member of his profession would likewise investigate it, and having done so would refute his opinions if they were not founded in truth; or, if they were true, join with him in impressing the world at large with that truth, as the best means of exterminating a set of impostors, who, under the pretence of curing ruptures, which they knew they could not cure, were continually practising the grossest frauds, and sometimes were guilty of absolute murder. His success was equal to his wishes; no man will accuse the surgeons who have flourished during the last fifty years of want of care or inclination to investigate the objects of their pursuit; this subject was continually before them, and they did fully investigate it, the consequence has been a full and universal confirmation of the doctrines of Mr. Pott, so that, if any point in the practice of surgery can be said to be absolutely fixed, it is that of the treatment of ruptures upon the principles recommended by Mr. Pott. S. C. is the *first* who has *publicly* arraigned the propriety of that treatment; if, in so doing,

doing, he was merely creating a difference of opinion upon a speculative subject, the consequence would be, comparatively, small; but if any surgeon, whose name is entitled to consideration, should seriously give his sanction to the world, that ruptures may be cured by this operation, the empirics, who very unwillingly relinquished it, would revive the practice, quote their authority, and, under the sanction of this name, revive the practice of those frauds, which no good man would ever wish to see practised at all. For this reason only, it is necessary to examine the arguments of S. C., to shew how little reason there is to believe that any benefit can be expected from that operation, with any improvement that can be made upon it. In doing this, as his opinions should certainly be examined with candour, his own words will be used wherever it may be necessary to quote him.

" He says, " Indisputably it *seems to be a very na-*
" *tural idea, that the descent of a hernia must be hindered by*
" *closing the aperture through which they protrude.*" This must undoubtedly be granted*, and will be confirmed by a stronger assertion, that it is the ONLY way in which a rupture can be cured; yet, *there is good reason to believe, that the aperture through which the parts forming a rupture protrude, never can be closed by the operation S. C. proposes*; and if this should be made out, it must inevitably follow, that no benefit can be derived from that operation.

He says, p. 163, " 1st, The hernial sac of a bubono-
" cele, as it is hardly necessary to premise, is formed by
" an elongated production of the peritoneum, *which is*
" *pushed down before the protruded viscera either into the*
" *groin or scrotum;* at its exit through the abdominal
" ring, it is situated over the spermatic chord, upon the
" anterior part of which, and tunica vaginalis, it also lies
" in its course downwards, and is only covered by the
" common integuments of the groin and scrotum. As it
" soon becomes adherent to the circumjacent parts after its
" first protrusion, surgeons are seldom or never able to
" procure its return.

 " 2dly,

* Though we are treating this subject seriously, I cannot refrain from putting S. C.'s position in other words, to shew it is so complete a truism, that it is surprising how any person, writing seriously, could make use of it. If by accident a hole should be opened, through which certain matters come out, the only way to make them keep in, is to close the hole up again. This is almost equal to Mr. Timbrell.

" 2dly, Probably it will generally be concluded, that " a hernial sac is capable of uniting by the adhesive in- " flammation, just as most other parts of the body do. If " any one doubts it, he has only to call to his remembrance, " cases *where a radical cure has occasionally followed the* " *concretion of the neck of the sac, after inflammation ex-* " *cited by the pressure of the pad of a truss*; also others, " where its internal surface adheres to the contained " viscera.

" 3dly, The generality of surgeons will, perhaps, " allow, that it may be united, but not firmly enough to " prevent the recurrence of the hernia; and may appre- " hend, that, in case it should recur, on account of " the altered state of the parts, strangulation will take " place. To such objections I reply, *that reasoning* " *on those radical cures that have occasionally been produced* " *by the pressure of a truss, and commonly endured through* " *life;* and considering the analogy of cases where the sac " and contained parts adhere so firmly together, as abso- " lutely to be inseparable without the knife, *it seems im-* " *probable that the adhesion of the neck of the sac should not* " *be firm enough to prevent a recurrence of the disease*; and " that the danger apprehended from the altered state of " the parts, is at least counterbalanced by that peril, to " which every person, subject to the occasional descent of " a hernia, is exposed."

Every point begged for in the preceding quotation will be conceded, and yet it is meant to contend, that, in no case, can this operation cure a rupture, without the application of a truss; and, by way of supplement, it will be contended, that if, as S. C. expects, it should succeed in very bad cases, it is impossible that it should succeed in very slight ones. The consequence of this argument, if the truth of it should be proved, would be, that those who have slight ruptures must suffer them to become bad, before they could have a chance of being cured by this operation; and as this is to be done only to avoid the trouble of wearing a truss to keep up a slight rupture, it is probable that many patients will not be induced to make the experiment.

The hernial sac has this peculiarity, that it grows thicker in proportion as it is extended, and may be so extended and protruded, as to cover and form a hernial sac for any portion of viscera that can constitute the largest rupture.

It

It is admitted, that the operation recommended by S. C. is very neat, and may be performed without danger to the patient; it may be granted, too, that this operation will obliterate most of the hernial sac, and yet the patient will gain nothing but the pain by the operation; for the hernial sac is a part of the rupture, the opening through which it descended not being kept close by pressure from a truss, will remain open; the viscera will, on the patient's becoming active, again protrude, carrying a fresh portion of peritoneum before it to constitute a new sac, and thus the rupture will be as compleat as at first. If this is foreseen, and the patient is advised to wear a truss for a time, to prevent a recurrence of the rupture, the operation is perfectly useless, since it is only recommended to render the application of a truss unnecessary.

Taking this view of the case, it is needless to enquire whether S. C.'s operation is an improvement upon other operations that have been performed with the same view; the argument here is, that it is impossible to cure any rupture by any operation that shall obliterate the hernial sac, (it is admitted, that the hernial sac may, in many cases, be obliterated by S. C.'s operation) since the radical cure depends upon a different circumstance; but this much may be said with safety: if S. C. believes and understands what he has written, he must know that his whole argument is a fallacy; for all his argument is by analogy *from* what does happen in the radical cure of a rupture by pressure of a truss, *to* what he thinks will happen if the operation he recommends is performed, though, in point of fact, the two cases are totally unlike.

Before the publication of Mr. Pott's treatise, the real state of the aperture through which the rupture descends was not well understood; since that period it has been well understood by professional men, though most of those who are not of the profession still entertain a very false notion of it: from its being commonly called the abdominal ring, they suppose it is an opening directly into the cavity of the abdomen, and only covered by the integuments, &c. But this is by no means the case; and as a right understanding on this point is necessary to enable us to see the fallacy of S. C.'s arguments, it will be excusable to extract Mr. Pott's account of it, in preference to producing any other authority.

"The

" *The pair of muscles called obliqui externi ascen-
" dentes, cover all that part of the belly which is without
" bone, and the lower and anterior parts of the thorax. They
" are fleshy on the sides, and tendinous on the middle
" and lower parts; they spring from the seventh and
" eighth ribs, and from all below them, by fleshy por-
" tions, which indigitate with corresponding parts of other
" muscles, called the serratus major anticus, and the
" latissimus dorsi, and becoming tendinous, are inserted
" into what is called the linea alba, the spine of the os
" ilium, and into the os pubis.

" At the lower part of the belly, on each side, a little
" above the last mentioned bone, the fibres of the tendon
" of this muscle separate from each other, and form
" thereby two apertures, through which pass the sper-
" matic vessels in men, and the ligamenta uteri in women.
" These openings are of an oval figure, *and have an oblique*
" *direction from above downward;* the upper part of them
" is rather wider than the lower, and they are of larger
" size in men than in women†.

" The tendinous fibres of this muscle, as they pro-
" ceed from its fleshy part obliquely downward, have
" several small apertures for the passage of vessels and
" nerves; and, at their insertion into the os pubis, they
" cross one another, and are, as it were, interwoven, by
" which means their insertion is strengthened, and their
" attachment made firmer.

" What is called by the particular name of pouparts
" ligament, is really nothing more than the lower border
" of tendon, stretched from the fore part of the os ilium,
" or haunch-bone, to the os pubis, and turned or folded
" inward at its interior edge. The other muscles of the
" belly are the obliquus internus, the transversalis, the
" rectus, and the pyramidalis, none of which have any
" concern with our present subject. The spermatic chord
" does indeed pass under the lower edge or border of the two
" first

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* Pott on Ruptures, p. 11.

† A detachment of fibres from the fascia lata of the thigh, is generally united with the tendon composing the aperture on the obliquus externus, which mixture or connection of fibres will, in some measure, account for the pain which they who labour under strangulated ruptures feel upon standing upright, and the relief which bending the thigh upward towards the belly always gives them.

" first of these, but at such a distance, and in such a " manner, that no action of these muscles can any way " affect, or even make any stricture either on it, or on a " hernia accompanying it; they have no perforations or " apertures, though so many writers of credit (even late " ones) have both described and delineated them*; con- " sequently they can have no share in the embarrassment " of the parts contained in a hernial sac, nor require any " division, in that operation, which becomes sometimes " necessary towards setting them free, which is a fact of " no small consequence to an operator.

" The inside of these muscles, and indeed the whole " cavity of the belly, is lined with a smooth, firm, but " easily dilatable membrane, called the peritoneum, a " minute account of which would lead me beside my pre- " sent purpose, and therefore I shall only observe, that it " lines the whole abdomen, and gives an external coat to " every viscus contained in it.

" Behind the peritoneum lies a loose cellular mem- " brane, by some called its appendix, which is found in " different quantity in different places. In some the cells " are empty, and are immediately visible upon being " blown into; in other parts it is plentifully stocked with " fat; and, though somewhat varied in its appearance in " different places, is found in most parts of the body.

" This

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* However incredible and strange it may seem, yet I am convinced, that operations have been performed by informations obtained from books only, without any previous anatomical knowledge, any practice on dead bodies, and barely any, if any, opportunities of seeing such operations performed by others on the living. How grossly must such an operator be deceived by the accounts of the rings, as they are usually, though absurdly, called, of the abdominal muscles. After he has divided the first, or that of the external oblique, he will expect to find a second in the internal, and a third in the transversalis, and will never suppose that he is got into the cavity of the belly, till he has divided all the three. It is, therefore, of the utmost consequence that this matter be set right, and that, notwithstanding what has been said on this subject by writers of great eminence, every surgeon be informed, that the external oblique muscle is the only one which has any opening in it; that the description given by Mr. Cheselden of these muscles, in the last edition of his anatomy, is erroneous; and all descriptions, and all delineations (some of which are to be found even in later writers) of more openings than that single one on each side, are not representations of nature, but are the images of a luxuriant fancy, and have no foundation in truth.

" This cellular membrane, void of fat, surrounding " the spermatic vessels, as they pass forth from the cavity " of the abdomen into the groin, is called the tunical va- " ginalis of the chord, or tunica communis vasorum sper- " maticorum; which chord, thus envelopped, passing " under the inferior edge or border of the transversalis, " and internal oblique muscles, and through the perfora- " tions or natural apertures of the external oblique, de- " scends through the groin to the testicle in such manner, " that the spermatic vessels, in their passage from the " cavity, are really and truly behind the peritoneum.

" The tunica vaginalis testis is a membrane perfectly " distinct from this, forming a particular cavity which " includes the glandular substance of the testicles, and has " nothing to do with a common rupture. In every fœtus, " until, or very near until the time of birth, there is an " open and free communication between the cavity of this " last tunic and that of the belly, for the passage of the " testicle from the abdomen into the scrotum: soon after " the birth, this passage closes and becomes impervious; " nor is there ever after the time of such closing, any " communication between the cavity of the belly, and that " of the tunica vaginalis testis. But though the passage " remains in general for ever shut, yet the place where " its orifice or mouth was, may always be known by a " kind of cicatricula, much like to what appears within " the abdomen, opposite to the navel, or place where the " umbilical vessels of the fœtus passed to and from the " placenta; at the place of which cicatricula the perito- " neum is generally weaker than elsewhere. Now, if it " be remembered, that this weak part is necessarily op- " posite to the natural opening in the tendon of the external " oblique muscle, that neither the internal oblique muscle, " nor the transversalis, come low enough to make any " resistence to whatever shall press against this part; and " that the acknowledged use of the muscles of the abdomen " is by pressing on all its contained viscera, to assist di- " gestion, the expulsion of the fœces, urine, and fœtus; " and that in many natural actions, such as sneezing and " coughing, &c. and in all great exertions of strength and " force, our erect posture must necessarily occasion a " pressure to be made against the lower part of the inside " of the belly, by some of its contents; a very probable " and satisfactory account of the common inguinal and " scrotal hernia may be collected."

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To the professional reader, the above quotation from Mr. Pott must be perfectly intelligible; to others it may be necessary to say in different words, that a rupture does not pass out of the abdomen by an aperture directly outwards, but obliquely between the muscles, the spermatic chord, and the integuments; and when a radical cure does take place, from the pressure of a truss, in a rupture that has descended completely out of the abdomen, it is effected in the following way: The viscera, or omentum, are returned into the cavity of the belly; that part of the peritoneum, which now constitutes the hernial sac, remains at whatever point it has been pushed to by the extrusion of the rupture: the truss is applied, not only to cover the opening through which the rupture has descended, but a considerable portion of the surrounding parts; and this pressure produces three distinct adhesions; 1st, between the integuments and the outside of the hernial sac, which lies in contact with them; 2dly, between the two sides of the sac which are brought into contact with each other; and 3dly, between the outside of the sac on the posterior part, and those parts which it lies immediately upon. These adhesions are produced by the pressure of the truss, so far as the size of the pad will allow it to extend, and thus render the aperture as impervious as it was before the rupture appeared. It is easy to see there is no analogy between these facts and those which must occur in consequence of the operation proposed by S. C.; of course, every argument which he is disposed to adduce by way of analogy from them, is without foundation.

But, evident as this must be to every well informed man, it is probable that S. C. will not accede to the above conclusion until it is proved; it will, therefore, be necessary briefly to explain the difference.

It is admitted, "That the hernial sac is capable of "uniting by the adhesive inflammation, just as much as "other parts of the body do;" it is admitted, that separating the hernial sac, by S. C.'s operation, from the peritoneum which has not yet extruded, will effectually prevent the viscera from descending into that sac which has been cut away, and that the divided parts of the peritoneum will unite perfectly; but what is to be the consequence of this union? Will it obliterate or cure the rupture? Most certainly not. *The passage through which the rupture descended remaining open, and the peritoneum being in a con-*

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dition to supply as much more of its substance as may be necessary to form a new hernial sac of any size, the *moment the patient begins to take the accustomed exercise, the rupture will begin to descend, and soon arrive at the size it was before,* UNLESS IT IS PREVENTED BY THE APPLICATION OF A PROPER TRUSS. The patient will then find he has undergone a painful operation, that is not quite without danger, for sake of avoiding the truss, which at last he will find his only safeguard.

But there is another point of view in which this proposal of S. C.'s ought to be considered. Those who, unfortunately, are afflicted with any disease, wish to get rid of it as soon as they can, and feel as little of its effects as possible; and professional men, whose interest will be most effectually served, and reputation most increased, by pleasing their patients in this particular, will find all their purposes will be best answered by taking the diseases they mean to cure at the earliest period; as the patient will suffer less from the disease, and be cured with more ease, while his own practice will be more successful, and he will succeed with less trouble than if he acted upon a different plan. Yet, S. C. writes upon a plan very different: he considers the worst cases of rupture as most certain of being cured; when these prove successful, those not so bad are to be undertaken; and when these likewise are cured, others, not so bad, may be undertaken, proceeding gradually as we succeed, till in the end not the most trifling rupture may escape being cured, if this operation is performed in due time. This proposition is so irresistably ludicrous, that it is difficult to conceive it can be seriously made by any professional man; yet S. C. seems to be serious, and his argument, when correctly addressed to a patient, would be this: Sir, you wish to be cured of the rupture you have; a radical cure is desirable, *but you are not yet bad enough to be cured.* Your rupture may now be effectually kept up by a truss; BUT "*a truss is a very cumbersome thing,*" and therefore you ought not to *wear a truss at all.* There is an operation *by which you may be cured, when your rupture is bad enough,* and to take the benefit of this operation, you have only to go without your truss for a few months. It is true, that a man who has a rupture, and wears no truss, is liable to strangulation, and death in consequence; but it is likewise possible, *by great accident,* that strangulation may come on while he wears a truss; therefore it is better not to wear

wear a truss, but increase your rupture as fast as you can, and when it is arrived at the desired point, the operation I recommend may be performed, and you may be effectually cured.

Thus far I have considered this as a question of theory *only*; but it is proper to mention a fact that will place it in a different point of view. In the note, p. 14, of this work, some notice is taken of a Mr. Lee, who pretended to cure ruptures by an operation; that operation was the same as the one recommended by S. C., viz. by dividing the sac from the peritoneum, at the part where the rupture left the abdomen, and closing up the orifice, thus to prevent the return of the rupture. This was the daily practice of Mr. Lee, so long as he could find patients who would confide in him; a practice undertaken upon system, boasted of as successful, and not abandoned by him, till the death of some patients, with very untoward circumstances, induced him to relinquish the practice.

It is not intended to draw any comparison between S. C. and Mr. Lee; but it is proper to say, that as the latter was bred to surgery, and had fixed his hopes of reputation and fortune on the success of that practice he had engaged in, it is but candid to suppose he performed his operation as well as he could, and took every care of his patients. The opposition he met with rendered the authentication of his success an object of consequence to him; yet, though he always boasted of it, he never could produce an authentic case in which he had succeeded; and it is probable, that a long period will elapse before one patient will submit to, or one surgeon perform, the operation recommended by S. C.; for, at the present moment, it is doubtful if even he is serious in making the proposition, or if his paper in the Medical Journal is not rather thrown out as a subject for disputation, than as a serious proposal to be reduced to practice. Yet, as much mischief may be done by even a playful attempt to disturb a practice that seems to be fixed upon a rock of adamant, it is hoped, that this attempt to discuss the subject seriously will not be without its use.

On curing Ruptures by the patent plaster.

Within a short time a patent has been obtained for a method of treating and curing ruptures, by means *of a plaster which* is or should be described in the specification of the said patent. As this is a subject of much consequence to those who are afflicted with ruptures, it is naturally entitled to notice in a work like this; and, accordingly it will now be investigated.

In the beginning of the last century, emplast. ad herniam was an article regularly kept in the shops, and as regularly prescribed by one set of practitioners, and proscribed by another, according to their different opinions of its efficacy in curing the disease; the dealers in secrets, who always have *something* MORE *effectual than what is known in general practice*, had their particular plasters, and the quacks, who improved upon those, had THEIR INFALLIBLE PLASTERS *for the cure of all kinds of ruptures, though ever so large and of ever so long standing;* but, even in that age of credulity, these pretensions were disputed, and since the modern discoveries with respect to this disease have demonstrated that from the nature and situation of the parts concerned in the disease, it is impossible that any external application should cure it, the quacks and the plasters have gone to the vault of *all the capulets*, from whence it was supposed they never would return.

This being the case, the patent mentioned above, must be obtained, either for the discovery of some ingredients of power superior to any before known to the medical world, for the discovery of some principle in the animal œconomy, which till now has been unknown, and the knowledge of which has enabled the discoverer to cure ruptures; to discover which of these is the truth, it will be necessary to examine the specification of that patent, which is extracted from the repertory of arts, &c. and the compilers of which will, no doubt, be able to prove whether it is, or is not, a correct transcript from the original in the Petty Bag office.

" To all whom these presents shall come, &c. Now, " know ye, that I the said J—— O—— B——, in com- " pliance with the said proviso, do hereby describe the " nature of our said discovery, and the method of the " treating and curing ruptures to be as follows; that is to " say,

" say, that our said invention and discovery, doth consist of " an ointment or salve, composed of the several drugs, and " mixed and compounded in the proportion following; " namely, one pound of incense pulverised, one pound of " almecago, one pound of turpentine, one pound of bal- " sam of capivi, and one pound and a quarter of white " or virgins wax, and in the same proportion for a greater " or less quantity, always adding one fourth more of white " or virgins wax. I likewise, further declare, that the " best method of making this ointment is, by first pound- " ing the incense and almecago till it is reduced to a fine " powder; then mix it with the turpentine and capivi, " repeatedly stirring it, for the space of three days, in a " strong basin or bowl of earthenware; then melt the " wax to an oily substance, and when so melted all the " other ingredients are then to be thrown in, when the " whole is to be put on the fire, and stirred for a quarter " of an hour. Then leave it for eight days; and, after the " expiration of those eight days it must be put on the fire " again, and be well stirred for a quarter of an hour, and " and when cold will be fit for use. And lastly, I declare " that the best method of using and applying the same, " and the rules and regimen to be observed and attended " to by the patients, are as follows: Cut a piece of leather " the size of the rupture, or rather larger, and spread the " ointment over it: then warm it a little, and apply it " exactly upon the rupture. The patient, however, must " first lay on his back, and if the intestines are down they " must be returned; and when they are restored to their " proper place and position, then the plaster must be im- " mediately applied to the part, and then secured or fas- " tened, by means of a truss, as tight as possible, and re- " main so for fifteen days, after which time the plaster is " taken off, and a fresh one put on for the space of fifteen " days more, making altogether thirty days; but it must " be perfectly understood, that after the application, " namely, on the first day, the patient must go to bed, " and remain there for twenty-four hours; and during the " whole thirty-days he must be extremely cautious not to " ride on horseback, nor walk fast or any distance; that " he should avoid going up and down stairs as much as " possible, and should not lift any weight, or use any exer- " tion, so as to extend the muscles: that he must also be " very particular in his diet during the thirty days, and

" avoid

" avoid eating butter, oil, and all simular substances; and " also, be extremely moderate in drinking, as well as in " every other respect, during all the before mentioned " period limited for the cure of the complaint in " question."

Such is the specification, which should, and in all probability, does contain a true account of every particular of the patentees discovery. All the ingredients that enter into the composition of the plaster, *except one*, are well known to professional men, and nothing will be hazarded in saying, that none of *them*, either jointly or separately, can have the least effect, when used with the intention of curing ruptures; all the efficacy of this patent plaster, then, *if it has any efficacy*, must reside in that ingredient, which is called (in the specification) *almacago*. Enquiries have been made of many professional men, of druggists and other dealers in articles of the Materia Medica, without discovering what almecago is; the patentee has not, then, fulfilled the conditions on which his patent has been granted, for unless he had described *what* this valuable *unknown* drug is, *and where it is to be found*, it will be impossible for any one, after the patent is expired, to prepare this *valuable* plaster. In the old practice, oxycroceum, and album græcum, were used in the emplast. ad herniam; and, if it should eventually prove that this patent is for reviving the old practice, and calling it a new discovery, it is possible, that almecago is a new name for some such valuable, but now forgotten remedy.

Leaving the almecago out of the question, we are entitled to say, that this plaster has no specific power for curing ruptures; and if we included that valuable article, we might not injure the patentee by making the same assertion, because his patent is not for a specific plaster, but for a *method of treating and curing ruptures*; as he does not pretend to have discovered any new principle in the animal œconomy to account for the success of his method, we are to understand, that the principles which are generally received among professional men are incontrovertible, and, directing our enquiries by these principles, we are to ascertain, 1st, how far the method of treating, &c. is new, and, 2dly, how far it is, *if it is at all effectual*.

The method of treatment directed, is, to reduce the rupture, and apply the plaster on the part; and *secure it by*

by means of a truss fastened as tight as possible for fifteen days; then to apply a second plaster and the truss again for fifteen days, by which we are to understand, from the term of the specification, that the cure is to be compleat in that time: no definition is given of what the writer means by curing a rupture; but, in candour, it must be understood, that he means to place the patient in such state of health that his rupture shall not return upon taking his customary exercises; and, that he shall be, in every respect, in the same situation he was in before his rupture made its first appearance; it is not specified that the writer has discovered any new principle in the animal œconomy, which should induce us, contrary to uniform experience deduced from our knowledge of existing facts, to believe that any rupture can be cured by the application of *this plaster*, or any the r external application; the patent, therefore, must rest its validity on its being an *attempt* to cure ruptures by a method unknown, and, consequently unpractised before; to determine this claim by comparison with what was formerly done, I shall briefly describe the old practice, and refer those who wish for farther information, to the History of Ruptures, published by Houston, who seems, with much labour, to have extracted all the facts that were known to different authors on the subject.

Two descriptions of men practised the cure of ruptures by the application of plasters; the first, actually believed the patients would be cured by what they did for them, and proceeded, *bonâ fide*, in their work; they emptied the bowels, applied their plaster with a truss to keep it on tight, kept the bowels open, and confined their patient strictly to bed for one, two, or three months, when they said they were well. As men who act from principle, though their practice should be inefficient, are seldom willing to admit this, and as many patients who have ruptures, have insurmountable objections to acknowledge that fact, it is not surprising that many persons who practised this method should get the reputation of curing ruptures, which they never did cure; but the second class acted in a different manner: their *practice was fraud, they knew they could not cure the cases they undertook, their object was to get the reputation of having cured each patient who applied to them; and, in consequence, additional employment, while they artfully* endeavoured to conceal their want of success: to answer these purposes, they proceeded in treating their patients by plaster, purging, and rest; but,

but, they added this advice; that they were well, but the parts continued weak, it would therefore, be necessary to wear a truss for some time to prevent a relapse; in this manner they parted with their patients; and, if these literally followed the last piece of advice, they *imagined* they were well, and the expectations of both parties were fulfilled: if the patient thought the parts had got strength enough to do without the truss, and found his rupture return, he was told it was a fresh rupture; and, if he had sufficient faith, the operation of performing the cure by plasters, &c. was to be repeated.

Thus much having been said of the efficacy of the patent plaster, and the *novelty* of the mode of curing ruptures by such applications, it only remains to ascertain what benefit may *really be obtained*, by a patient who submits to that mode of treatment. The inconvenience a patient suffers when he first puts on a truss, is from pressure of the truss upon parts that are not accustomed to bear pressure; from friction upon those parts from the necessary actions of the body combined with the effects of pressure, and from the efforts made by the parts to descend, notwithstanding the resistance of the truss: all this inconvenience will disappear in no great portion of time; the parts will then bear pressure without creating pain, the effects of friction may be guarded against, and it is continually found that a rupture which could scarcely be kept up an hour at a time by a truss on first application, will, after some time, be perfectly and continually kept up by the same truss that seemed at first to be insufficient to produce that effect: but, a man, otherwise in good health, if he is a little irritable, will find it easier to complain of such inconveniencies than to bear with them till they disappear; if such a man was laid in his bed, and told he must remain there for some time, and then that he must take no exercise for a month, and, if any trifling application was made to amuse his mind, and persuade him it was really an important remedy that would work his cure, he would, in all probability submit, and at the end of the month, not feeling the inconveniencies he did feel in the beginning of it, might *imagine* he was cured, and then would not find it very troublesome to wear his *easy truss so long as the parts continue weak, in order to prevent a return of the disease;* this is all the good that, in my opinion, has ever been done by plasters when applied to cure ruptures; nor, till there is much stronger evidence

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to prove the fact than has yet come to my knowledge, shall I believe that the patent plaster, or the patent method of treatment and cure, is more effectual than any other plaster, or method of applying a plaster, that has ever been used.

On the empirical Practices of the present Day.

There may be some men living, who remember the confused state of professional opinions respecting ruptures, and the method of treating them, before the appearance of Mr. Pott's treatise on that subject. There are many who remember, that after the general attention which professional men had given to it, had settled their opinions respecting it, the quacks of the day adhered to the old practice, and made it a vehicle of deception and fraud; but these at last disappeared, and the rational practice was permanently established. Under these circumstances, it must excite great surprize to see that *one* man, if not two, whose name in the profession of surgery is entitled to respect, endeavour to revive an operation which long experience has proved to be ineffectual; and another person obtain a patent for a *pretended new method* of curing ruptures, which, in fact, strikingly resembles the practice of the old system of quackery. These things seem to prove, that something like fatality keeps the spirit of quackery for ever active in its attempts to prey upon the credulity of ruptured patients; and, as the antidote should at least be equal to the poison, it is hoped that the following hints on the empirical practices of the present day, may not be without their use, in guarding the unwary from the snares that are laid for them with no sparing hand.

In the profession of surgery, and in every department of the healing art, much must be done, in doubtful cases, by the judgment of professional men, reasoning by induction from known facts, to others that are not so well understood. Their success will be various, in proportion to their knowledge, their penetration and their judgment: those who have most talent will be most successful; but the inferiors, though they will acquire less reputation, will incur no censure while they act honestly according to the best of their judgment; since their want of success is the consequence of want of talent, and not want of industry or integrity.

Whether the art of adapting mechanical instruments to such diseases as can only be remedied or alleviated by such assistance, is to be considered as a branch of surgery, when properly exercised by those who are qualified by education and experience for the undertaking, or whether it is only an humble attendant upon surgery, is of no consequence; since those who engage in it are to be judged for their conduct upon exactly the same principles. That this profession, art, or occupation, has not been commonly followed by men who have been properly educated for the task, is perfectly notorious; though there are some exceptions to a practice that is but too common, there are exceptions, too, of another kind, which have been very common, and the source of much mischief to the unfortunate. It will be proper to point these out in concluding this work.

When a surgeon tells his patient in private, or writes to tell the public, that trusses which do not properly keep up the ruptures they are applied to, are mischieveous things, and ought to be avoided as likely to prove fatal; that many ignorant men, totally unqualified for the employment, do undertake to make trusses; and that, therefore, every patient should be careful to apply to a man who is properly qualified for his employment, and even apply to his surgeon to see that the truss is properly constructed, adapted and applied; that surgeon is entitled to praise, for he does his duty by his patient. But if it should ever happen that a surgeon, unfortunately for himself, without practice, and, as unfortunately for those who trust him, without principle, should invent a system of quackery, pretend to be employed by a respectable establishment which does not exist, and arrogate to himself superior reputation for skill in the treatment of the disease which it is pretended is the object of that establishment to provide a remedy for, though the establishment was a creature of his own creation, and intended as a tool for his nefarious practices; if, instead of providing, or being able to provide, the best remedies for those who may be induced to apply to him, he procures the worst, because they afford a good profit to himself, he would be entitled to the contempt and execration of mankind; because, he fraudulently trifles with the diseases of the unfortunate, for the sake of making a *good thing* for himself. That such a man *has* existed is well known; and those who are interested in knowing the fact, will do well to ascertain that such a person

person does not exist, before they trust to many of those who will be willing enough to recommend themselves to their notice.

It has been said, with truth, that much mischief has been, and is continually done, by trusses badly made, or applied by ignorant people; and that most of the quackery of the present day is carried on by ignorant, unprincipled men, who pretend to make trusses. That this observation may not be converted into a general reflection, it seems necessary to explain how far, and under what circumstances, it is true.

Many persons are employed in making trusses, who follow it as a mechanical trade: some of them are men of property and unspotted integrity; but, not having all the knowledge that is requisite to qualify them for their employment, their practice is necessarily defective in proportion to the deficiency of their information; yet, as they act with the best intentions, and to the best of their ability, they cannot be censured for want of probity: they are to be considered as men of inferior talents, who follow the employment they were bred to, and very honestly do their duty as well as they can.

But the greatest and most frequent injuries are sustained by those patients who are induced to employ workmen of the lowest order, who are *totally unqualified in every respect* to construct, adapt, or apply a truss with propriety; yet, in consequence of having been employed as labourers by some person of reputation, set up for themselves, and, being equally destitute of knowledge, modesty or shame, boldly undertake to do what they are unable to perform, and too frequently injure those who employ them. As this is a subject of much importance, I trust I shall be excused for endeavouring to prove it in the most satisfactory manner.

Those who reason upon this subject by analogy from what may happen in common mechanical trades, will judge very falsely in supposing that a workman of any description, who is employed in making parts of trusses, can ever acquire that kind of knowledge that will enable them to adapt and apply them with propriety; yet the arrogance of such people frequently induces them to make the attempt; and patients, who trust themselves in their hands, have frequently occasion to repent of their imprudence; but, as a declaration of this kind should not remain in the form of a mere assertion, it will be necessary to produce

the proofs, which I shall do by explaining the nature of the manufactory, as conducted by myself.

During the time I have been engaged in it, I have employed not less than an hundred hands, at different times; none of them bred to the employment I put them to; all of them put to different kinds of work proportioned to their talents; many of them desirous to gain all the information they could for their own advantage, and not a few very willing to pilfer any thing that would be advantageous to themselves. Every article that goes from my house is different, no matter whether better or worse, from the articles intended for the same purposes that can be got elsewhere. It has been an object with several to imitate them, and get the best information they could for that purpose; and I can point out one person who has sent men to offer themselves for employment to me, that they might enable *him* to make imitations of those things which have acquired reputation in my hands. Against villainy so determined, and so constantly exercised, no man could stand a single year, unless he was able to keep his people in check so far as to make them do what he wanted, without gaining a knowledge of those circumstances to which he owes his superiority; and as some of those persons I have discharged may, at a future time, without any actual qualification, pretend to knowledge on these subjects, in consequence of having been employed as labourers by me, it concerns my own character to shew that such pretensions are without foundation, and circumstances artfully adopted as colourable pretences to impose upon the unwary.

The articles which are connected with the business of my house may be reduced to three distinct classes, of which I shall treat separately. 1st. Trusses and bandages for similar purposes; 2dly, such various instruments as are used in correcting the deformities of children; and 3dly, such instruments as are used in my particular practice of curing various distortions of the limbs and body; each of these classes shall be considered separately.

Having found a workman who is able to make springs, he is employed to make a large number of one size and strength, these when done are taken away; he is then employed upon another size, and so on progressively, till an assortment is obtained of every size and every degree of strength that can possibly be wanted. Each size is then put into the hands of another workman, with a pattern formed by myself, to which he is to turn that size exactly; each

each size passes through his hands in the same manner, and are removed from him: they are then given to another, whose business it is to temper them, and in this state they are finally removed to the warehouse till wanted for use.

The leather for coverings is cut out and prepared by journeymen sadlers and workmen of that description, and finally made by women kept at a distance from the house, and who are totally unknown to every other person in my service; complete assortments of the pads and springs for them are made and stored up in the same manner, so that I have constantly by me an assortment of all the parts of many hundred complete trusses, including every variation of size, strength, &c. that can possibly be required, and yet, not one of them can be completed without specific instructions from myself.

An assortment is finished by putting all the parts together, by specific instructions from myself: these are kept ready for use; but when any one is wanted different from those which are ready, reference must be made to me; upon learning those circumstances which are necessary respecting the patient and his disease, the parts that are requisite to form a proper truss are selected, put together and finished by the proper workmen; from this account it must be evident, that a set of workmen may be employed in making parts of trusses for many years without having made *one complete*, of course they cannot have learned, *by experience, how to make one.*

With respect to the collars, and other instruments in general use, the same system is pursued; different parts are made to patterns by different workmen, some in the home manufactory, and others in distant situations totally unknown to the rest; a large assortment of these parts is kept ready, are adapted to each other, and the essential forms given by myself, and they are finished for use by a different set of workmen from those who did the former parts.

The third assortment is in a situation still different; it consists of the instruments which are used in my peculiar practice of curing distortions of the spine, and legs, and feet of children: these instruments are formed from correct designs made by myself, from the patients to whose cases they are peculiarly adapted; these patients and their particular defects are never known to any person in my service; the workmen who are employed never knew for what, or for whom any instrument is intended, of course, they can

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gain neither knowledge or experience on this head, beyond that of a labourer who has been employed upon, and can execute work which he does not understand. *

It is now, perhaps, evident, that no workmen, who are employed in this manufactory, can ever gain knowledge or experience, as to the use and application of the articles they work upon; even if they were qualified by education to understand it; yet it is notorious, that many workmen of the lowest description do attempt to engage in undertakings of this kind; and, by assuming the name of truss-makers, do infinite mischief to those who employ them; and being confounded with respectable men under the same title, give opportunity to such *sapient critics* as Mr. Timbrell, to say, *truss-makers are not men of science*, and to believe that such stuff as he has written may be a vast addition to the existing stock of knowledge upon this subject: general reflections are always false, but it is likewise true, that inconceivable mischief is done by many ignorant workmen, who undertake to make and apply trusses; yet it would undoubtedly not be true to say, that all who follow the same occupation are liable to the same censure: the mischief that is done by this species of quackery is to be attributed principally to the patients who employ them; for so long as every labourer, who has been employed in the lowest offices of a manufactory of this kind, can be supposed to have learnt as much as will enable him to construct, adopt and apply bandages and other instruments, to such cases as require mechanical assistance; and so long a a liberal, at least an appropriate education is not considered an essential requisite to qualify a man for this employment, so long will the quackery of ignorant workmen, improperly called truss-makers, exist; at once a disgrace to the common sense of mankind, and a pest to society.

There is another practice that may, without impropriety, be called quackery, which is nearly as pernicious as the last mentioned; this is by obtruding upon the Public,

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* What has been said on this subject is only illustrated by what actually passes in my own manufactory, because I am *only to speak of that which I do know:* and I am not acquainted with the interior of any other person's manufactory, yet there is little doubt, that if the interior management of other houses was made known, it would afford additional information to prove, that no common workman, who is employed in such a manufactory, can ever obtain so much knowledge as will enable him to construct and apply a truss with propriety.

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under the sanction of patents for new inventions, modes of making trusses which are either obsolete or ineffectual: a man who has no actual knowledge on the subject, imagines something different from what he has read, concludes he has invented what was not known before, and obtains a patent for his invention: candour induces one to suppose that *so* far he has proceeded without corrupt or unjustifiable motives; had he made previous enquiries, he might have learned that what was new to him had been well known to others, but having, when too late to retract, staked his money, he enters the lists, puffs his article to make it sell, without any regard to his present knowledge of his own imposture, till he is driven by neglect to abandon it, or encouraged by success to become a determined daring impostor, totally regardless of whose health he may injure, or whose life he may destroy, provided he does but sell his patent invention. I shall not, however, enlarge more upon this subject here, but only observe, that there are one or two pretended patent inventions at this moment obtruded upon public notice, upon the detestable principle I have just mentioned.

This tract has grown to a size far beyond what I expected at the time I sat down to write: it seemed, in speculation, very easy to explain the rational method of treating ruptures, and examine some of those inventions which were connected with it; but, upon closer inspection it appeared, that many parts of the subject had been so studiously confused, and falsehood so artfully substituted for truth, that it required both industry and exertion to place the various parts in their proper point of view. It would have been easy, indeed, to say that one thing was good, or another was bad, that this opinion was right or that was wrong; but this would have been adopting that kind of conduct which ought always to be reprobated, *viz.* of relying upon assertions instead of producing proofs: instead of acting in this manner, I determined to collect from the works of those whose pretensions were examined, facts that were incontrovertible; and which, when rightly understood, would enable every reader to form a just conclusion on the subject, but have not pretended to draw any conclusion myself: this has been attempted, with what success must be determined by the event; if I shall have succeeded in demonstrating that, although the construction, adoption, and application of trusses to ruptures, has been too frequently followed as a mechanical trade by workmen of the lowest description,

description, that although others with equal ignorance and less principle have pretended to make trusses that are specific applications to all ruptures under all circumstances, this trade, art, or profession, which ever it may be called, can never be followed with propriety and effect, except by men who unite in their own persons the scientific knowledge of the diseases which come under their observation, and the skill of the scientific mechanic to direct the construction of those remedies which it may be necessary to apply, I shall have rendered an essential service to society by indicating the only rational practice, and laying a foundation for exterminating a species of empiricism that is, at once, an insult to common sense and an injury to society.

FINIS.

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